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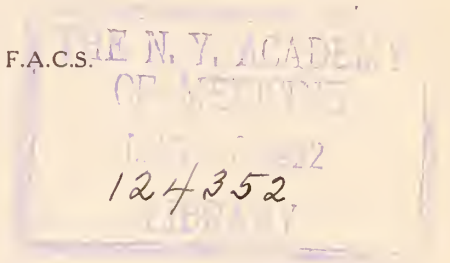
OF THE

Indiana State Medical Association

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY
UNDER THE DIRECTION OF THE COUNCIL

ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
Editor and Manager



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THE INDIANA STATE MEDICAL ASSOCIATION

Next Annual Session, Indianapolis, September 28, 29 and 30, 1921

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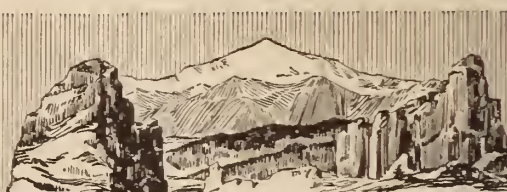
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VOLUME XIV

FORT WAYNE, IND., JANUARY 15, 1921

NUMBER 1

ORIGINAL ARTICLES

THE ROLE OF THE ROENTGEN RAY IN DIAGNOSIS OF THE SURGICAL ABDOMEN WITH SPECIAL EM- PHASIS ON ITS USE IN THE GALL BLADDER AND APPENDICEAL REGIONS*

B. R. KIRKLIN, M.D.
MUNCIE, INDIANA

The purpose of this paper is to bring to your attention the value of the Roentgen ray as an important factor in diagnosing pathological conditions in the abdomen and chest, laying special emphasis on the gall bladder and appendiceal regions.

We are all aware of the fact that very few patients present themselves who have such definite and characteristic clinical findings that we can say positively that "right here lies this patient's trouble." If so, then please tell me why surgeons still operate for acute or chronic appendicitis or cholecystitis only to have the patient return after the operation with the same symptoms, and then after having a careful Roentgen ray examination, discover that the primary trouble was a renal calculus, chronic ulcer, or some other abdominal condition. Please do not misunderstand me in making the above statement, for I do not by any means mean this as disrespectful to the surgeon, for what surgeon has not made such mistakes. They are not superhuman. The point I do wish to make is: That we are not justified today in making the diagnosis of a surgical abdomen without having taken advantage of all the methods at our disposal which can throw light on the diagnosis. This was excusable a few years ago when a man had to depend largely upon his own ability, but now there are very

few medical centers of any size that do not have a trained and competent Roentgenologist—and we must insist that he be competent, for if he is not, the Roentgen ray will do more harm than good by the incompetent man arriving at the wrong conclusions. Therefore, I propose to try to prove to you that the Roentgenologist can be of invaluable assistance in helping to arrive at conclusions concerning a pathological gall bladder or appendix.

It is true that a great many patients are examined by Roentgen ray methods without the Roentgen ray alone revealing the correct diagnosis, but, on the other hand, if there be any doubt whatsoever concerning the correct diagnosis, the procedure is certainly justified if certain doubtful conditions have been eliminated by employing them, and the surgeon and family physician have been saved possible embarrassment later on.

I believe you will all agree with me that any of the following conditions should be confirmed by the X-ray, viz: cardiospasm; gastric, duodenal or jejunal ulcer; pyloric stenosis; gastric or intestinal neoplasm with the possible exception of carcinoma of the rectum; urinary calculus; intestinal obstruction; gastropexia; enteroptosis; nephroptosis; etc. I wish to state for the benefit of those who are still skeptical concerning the value of the Roentgen ray in any of the above named conditions that it is my opinion, that if the findings are correctly interpreted, the Roentgen ray methods are of more value than any other one method at our disposal in determining any of the above named conditions. For this reason, I shall only mention them and refer to them later by showing a few slides and reporting some cases, and confine the most of my time to presenting that phase of Roentgenology that pertains to the diagnosis of pathology of the gall bladder and appendix.

GALL BLADDER

Up to a very few years ago gall stones were detected by the Roentgenologist in such small percentage of the suspected cases that most

* Presented before the Indiana State Medical Association at the South Bend session, September, 1920.

Roentgenologists did not recommend Roentgen ray examinations, and only made them when urged to do so. Men like George, Case and L. G. Cole, however, found that gall stones containing calcium could be detected much more frequently than they had suspected, which stimulated the search. While as yet few Roentgenologists have published their reports, the general opinion is that from sixty to ninety per cent of gall stones will show. George and Leonard claim to demonstrate from eighty-five to ninety-five per cent. During the past eighteen months we have been able to show over ninety per cent of the pathological gall bladders that have been examined by Roentgen methods in our laboratory and later operated.

Gall stones fall into one of two groups: (1) Stones which contain no calcium, and (2) stones which contain considerable calcium. The dense calcareous gall stones are far in the minority, but are very easily demonstrated when present. This fact may account for the reason why the study of gall stones by Roentgen ray methods, has made so little progress. By far the greater number of gall stones consist of a cholesterine nucleus with a calcareous coating. When the calcareous deposit is thin, which is true of about fifty per cent of the cases, the stones are difficult to detect. It is considered impossible to demonstrate a pure cholesterine stone; but it is probably safe to say that an absolutely pure cholesterine stone is a rare entity. As you no doubt can see, the question of Roentgen ray diagnosis of gall stones and pathological gall bladders depends first, upon the ability of the Roentgenologist to use the correct technique in demonstrating them on the plates, and secondly, to correctly interpret the various shadows produced by pathological gall bladders, and the stones with very small amount of calcareous deposit for these are the stones which are encountered most.

A careful study of the clinical history of cases in which gall stones are definitely shown by Roentgen methods, reveals the futility of expecting the classical gall bladder symptoms to agree with the Roentgen diagnosis. Our present experience indicates that only when a gall stone passes or engages does it cause the typical gall stone colic, and this is relatively rare compared with the frequency of gall stones.

The clinical indication of gall stones compare with those of pyelitis except that we cannot detect the presence of pus in the stools as readily as we can detect it in the urine. Some of the cases of gall stones and cholecystitis give no characteristic symptoms of gall bladder disease but are associated with obscure gastrointestinal symptoms.

We not only attempt to demonstrate gall

stones but also attempt to demonstrate any pathological gall bladder. We are able by the density of the gall bladder shadow to detect a thickened gall bladder filled with bile of a very high specific gravity and by giving the patient a barium meal we can demonstrate a cholecystitis with adhesions and also can frequently outline the pressure of the gall bladder against the stomach, duodenum or colon.

Even if no suspicious shadows be present, a number of Roentgen ray findings following a barium meal are of assistance in the diagnosis of pathological gall bladder, with or without stones, namely:

1. Hepatofixation of the stomach, the pyloric region being drawn to the right and upward in a significant manner.

2. A definite small area of pain to pressure accurately localized to the outer side of the shadow of the duodenum. It is a characteristic of such cases that there is a lag in the emptying of the duodenum.

3. The presence of Riedel's lobe of the liver, when demonstrable following gas distention of the stomach and colon, is another contributory sign of gall bladder disease, in which jaundice is not present. This sign may be of special value.

4. The hepatic flexure of the colon may occupy an unusually high position, a further suggestion of gall bladder disease.

5. The emptying time of the stomach following a barium meal is usually much shortened, and the outline of the duodenum is well seen owing to a delay in the emptying time of the duodenum or to a too rapid out-pouring of the stomach contents through the duodenum. It was formerly supposed that this unusual visibility of the duodenum strongly suggested duodenal ulcer, but Case states that in his experience it may occur in any duodenal affection or in gall bladder disease.

It quite often happens that the trained Roentgenologist will make a diagnosis of pathological gall bladder with or without stones, only to have the surgeon inform him that he palpated the gall bladder at operation, and found it normal. I wish to say here that I do not believe that the Roentgen evidence or any other evidence should be considered wrong until the accused gall bladder has been removed and submitted to a histological examination, for is it not a fact that it is impossible for the average surgeon to make a diagnosis of normal gall bladder by palpation alone? I believe that it has been definitely proven that it is. Dodd has reported a case from the Massachusetts General Hospital where both the surgeon at operation and the pathologist at post mortem failed to palpate the stones which were later found in the distended bladder.

By means of the special technique for making and interpreting Roentgen plates, a positive diagnosis may be made in so many cases that the negative diagnosis has become of considerable significance.

George and Leonard state that Roentgen methods of diagnosing pathological gall bladders has become so accurate that if there be no direct Roentgen evidence of gall stones, or indirect evidence of adhesions involving the stomach, cap, duodenum or colon, as a result of cholecystitis, the surgeon should have a preponderance of clinical evidence as a warrant in operating for gall stones.

APPENDIX

In taking up the region of the appendix, we naturally have to consider the appendix, cecum and terminal ileum.

It seems to me that all that is necessary for one to be convinced of the importance of the Roentgen methods in diagnosing pathological conditions of the appendix is to study some of these appendices by these methods and then follow them to the operating table. The results are most gratifying. It goes without saying that the Roentgen ray is of no special importance in acute appendicitis, in fact, it is contraindicated, for, fortunately the clinical picture is usually definite enough. It is sometimes advisable, however, to eliminate urinary calculus or carcinoma of caecum.

In some cases of acute, left-sided pain, where we are suspicious of transposed viscera, it is a very simple matter to use the barium enema and eliminate any guessing.

The study of the appendix by Roentgen methods must be done very carefully and thoroughly. The horizontal and vertical fluoroscopes are very valuable assets, especially for palpating and determining adhesions and tenderness. It is easy if the appendix fills, and *every normal appendix will fill*, to palpate the appendix and observe it in action, as it were. It is certainly an advantage over palpating blindly in the region of McBurney's point, for we know, with the aid of the fluoroscope, whether or not we are directly over the appendix. In some cases, especially the retrocecal appendices, we are unable to demonstrate the appendix, except with the fluoroscope.

As is true in every other division of Roentgenology, it is first necessary that the Roentgenologist familiarize himself with the normal appendix and the normal variations, before he can recognize the pathological appendix. Because the appendix fills and is visualized does not mean that we are dealing with a pathological appendix, for as I have stated above—*every normal appendix will fill*. George states

that there is no exception to that statement. I have found, however, in my very limited experience, that there may be possibly one exception. That is, the atrophic appendix in old people. Their appendices may be obliterated and still be innocent.

The appendix is made visible by the meal in its lumen. Its lumen should be regular and at least as wide at its proximal end as its distal, in order to properly drain. It may lie in most any position about the cecum but should be free. If it be free it may be found in one position on one plate and in a different position on a second plate made just a few minutes later. It should be freely movable to manual palpation and should be empty when the cecum has emptied. It is interesting to study the normal appendix of a child under the fluoroscope and watch it intermittently fill and empty and move about in the abdomen. It is very essential not to mistake a small residue in the terminal ileum for the appendix shadow.

I have found stereoscopic plates to be of great assistance in studying the appendiceal region, in fact the whole gastro-intestinal tract.

Dr. A. W. George, of Boston, states that a chronic appendicitis may be shown by:

(1) Absence of the appendix shadow. (2) Abnormal conditions of position, shape, and size of the lumen. (3) Concretions. (4) Tender point. (5) Adhesions.

We quite often find associated with a chronic appendicitis a stasis of the terminal ileum. The terminal ileum has been a fertile field for study during the past few years. One cannot be interested in this part of the alimentary tract without studying the results of the investigations of Lane, Case, Jordan, Bambridge and others. Case has written a great deal on stasis of the ileum, laying special emphasis upon the study of the ileocecal valve. He is of the opinion that there is an incompetency of the ileocecal valve if any of the barium enema gets by the valve. In studying the ileocecal region, it is important to examine both after the ingestion of the barium meal and after the injection of the barium enema.

I think the X-ray investigation of any part of the alimentary tract must be incomplete unless it includes a careful study of at least the entire digestive tract and chest.

ROUTINE EXAMINATION OF CHEST

Groover and Christie of Washington, D. C., report that out of 1300 cases examined by Roentgen methods in two years a chest examination by the fluoroscope and stereoscopic plates were made in 1111 cases. In fifteen per cent of all the cases so examined, definite pathology was found in the chest, and they were only able

to demonstrate actual pathology in the gastro-intestinal tract in thirty-nine per cent or only twice as many gastro-intestinal lesions as chest lesions in 1300 cases referred in for gastro-intestinal study.

TECHNIQUE

It is our practice when a patient presents himself for examination to first make several plates of the gall bladder and also the kidneys if at all doubtful about them. Then we fluoroscope the chest, and if there be anything at all suspicious, we make a set of stereoscopic plates for further study. At this time we give the patient the opaque meal and after carefully studying the stomach and duodenum under the fluoroscope, several plates are made. The patient is asked to return at three, six, eighteen and twenty-four hours for further observations. If there is still part of the meal present at twenty-four hours he is asked to return again until we are able to determine all we can concerning his case. If indicated, an opaque enema is also given and a careful fluoroscopic and plate study of the colon are made.

CONCLUSIONS

In conclusion, let me say that it is my opinion that by the skillful use of the Roentgen methods alone, in the proper hands, it is possible to diagnose from eighty to ninety-five per cent of all pathological gall bladders and appendices. I do not think it is fair to condemn the use of the Roentgen methods just because every man who possesses an X-ray machine doesn't show gall stones, and gall bladder pathology, or pathological appendices, as it may be the man and not the X-ray that is at fault. It would not surprise me to know that one hundred per cent of the pathological gall bladders are shown on our X-ray plates, but to date, no one has developed his art to the extent that he can correctly recognize and interpret these shadows as such. I believe it is possible, however, and that some time in the future someone will develop this specialty to the point where we can demonstrate a still much higher percentage of these conditions.

As in all other branches of Roentgenology, the most important factor in this work is the correct interpretation of the various shadows as seen on our X-ray plates and screens. It is also necessary to be quite conservative in interpreting our X-ray findings, for the over enthusiastic man is very apt to do serious harm by arriving at the wrong conclusions in his enthusiasm.

CASE REPORTS

GALL BLADDER

CASE No. 1194: Female adult.

Roentgen conclusions: Large pendulous gall

bladder with stone in cystic duct and at least nine small gall stones free in bladder. Pathological appendix. Operated by Dr. C. M. Mix.

Operative findings: Roentgen diagnosis confirmed. Ten gall stones were found.

CASE No. 1074: Female young adult.

Roentgen conclusions: Pathological gall bladder and appendix. Probable gall stones. Operated by Dr. C. M. Mix.

Operative findings: Gall bladder thickened. Sixteen gall stones size of ordinary dice. Appendix obliterated and bulbous.

CASE No. 1416: Male adult.

Roentgen conclusions: Pathological gall bladder with large stone. Pathological appendix. Undoubtedly a surgical abdomen. Operated by Dr. Ed Clark, Indianapolis.

Operative findings: Large thickened gall bladder with stone corresponding in size to one seen by Roentgen examination. Five small gall stones. Pathological adherent appendix. Surgeon was doubtful about the appendix in this case until it was explored.

CASE No. 1299: Female adult.

Roentgen conclusions: Pathological gall bladder with stones. Pathological appendix. Operated by Dr. C. M. Mix.

Operative findings: Large thickened gall bladder filled with small stones. Large adherent appendix.

CASE No. 1814: Female adult.

Had been diagnosed "Lack of Acid" and treated for same by two large medical centers where X-ray was not used to aid in diagnosis of gall bladder disease.

Roentgen conclusions: Pathological gall bladder with stones. Chronic inactive pulmonary tuberculosis.

Operative findings: Not operated, on account of pulmonary findings.

CASE No. 1883: Female adult.

Roentgen conclusions: Pathological gall bladder filled with stones. Operated by Dr. C. M. Mix.

Operative findings: Thickened gall bladder with many small stones.

CASE No. 1964: Female adult.

Roentgen conclusions: Pathological gall bladder filled with stones. Pathological adherent appendix. Operated by Dr. Geo. R. Andrews.

Operative findings: Gall bladder surrounded by adhesions and contained 32 sharp-edged stones. One stone in duct. Appendix densely adherent—unquestionably pathological.

CASE No. 2203: Female adult.

Roentgen conclusions: Pathological gall bladder with stones and pathological appendix. Operated by Dr. E. H. Clauser.

Operative findings: Firm adhesions involving gall bladder, liver and pylorus. Gall bladder

contained two stones 1 cm. in diameter and several smaller stones. Appendix not explored.

CASE No. 2408: Female adult.

Referred in with clinical diagnosis of left renal pathology.

Roentgen conclusions: Pathological gall bladder with large stone.

Operative findings: Not operated. (Refused.)

CASE No. 2794: Female adult.

Roentgen conclusions: Pathological gall bladder with two large stones. Operated by Dr. C. M. Mix.

Operative findings: Roentgen conclusions confirmed.

APPENDIX

CASE No. 3020: Male young adult.

Roentgen conclusions: Normal appendix.

Operative findings: Roentgen conclusions confirmed.

CASE No. 1029: Female adult.

Roentgen conclusions: Pathological appendix. Operated by Dr. Will C. Moore

Operative findings: Chronic appendix. Constriction at base. Bulbous end.

CASE No. 1080: Female young adult.

Roentgen conclusions: Evidence of pathological appendix and stasis of terminal ileum.

Operated by Dr. Will C. Moore.

Operative findings: Chronic appendix with concretions.

CASE No. 1216: Male adult.

Roentgen conclusions: Pathological adherent appendix with prolapse of ascending colon.

• Suspicious evidence of pathological gall bladder. Operated by Dr. Goethe Link, Indianapolis.

Operative findings: Chronic appendix with adhesions involving the cecum and ascending colon. Gall bladder normal to palpation.

CASE No. 1942: Female adult.

Roentgen conclusions: Pathological appendix, chronic inactive pulmonary tuberculosis.

Operative findings: Not operated, on account of pulmonary findings.

Pulmonary findings confirmed by Drs. F. G. Jackson and Fred Glascock, Muncie.

CASE No. 2060: Young male adult.

Roentgen conclusions: Retroperitoneal abscess in lower right abdomen—appendix probably involved. Operated by Drs. Mix and E. H. Clauser.

Operative findings: Roentgen conclusions confirmed.

CASE No. 1236: Male adult.

Referred in with clinical diagnosis of gastric carcinoma.

Roentgen conclusions: Pathological appendix

with dense adhesions involving cecum. Suspicious evidence of pathological gall bladder. Operated at Mayo Clinic.

Operative findings: Chronic hypertrophic appendix, densely adherent, probably accounting for patient's symptoms. Gall bladder incision revealed a few adhesions about gall bladder.

ASSOCIATED PATHOLOGY

CASE No. 1207: Female adult.

Referred in with clinical diagnosis of gall bladder disease.

Roentgen conclusions: Stomach, duodenum and gall bladder negative. Left kidney shadow considerably enlarged. Chronic active pulmonary tuberculosis, complicated with pleuritis involving right base, which is probably accounting for patient's present symptoms.

Above conclusions confirmed by Dr. Alfred Henry of Indianapolis.

CASE No. 1456: Male young adult.

Roentgen conclusions: Pathological appendix.

Suspicious of old pyloric ulcer probably healed. Chronic inactive pulmonary tuberculosis involving left upper lobe. Operated by Dr. J. R. Eastman, Indianapolis.

Operative findings: Pathological appendix. Tuberculosis peritonitis. Mass in region of pylorus. Owing to tuberculosis peritonitis surgeon thought best to let pylorus alone. Patient developed acute miliary tuberculosis shortly after operation.

DISCUSSION

DR. WILLIAM DAVIDSON (Evansville): I was much interested in a case a number of years ago which was brought to my attention in a rather peculiar way in order to corroborate diagnosis. It has happened a number of times since, but this first case was a young man, a mining engineer who had had some intestinal trouble. He reported that he had had no fever, but he had peculiar attacks of pain. He had been treated four or five months for colitis, had had repeated flushings and various medications, and when I saw him he was very much amazed at a diagnosis of appendicitis. In order to corroborate I decided to make plates. They showed the appendix adherent, and along the outer posterior aspect the cecum showed a beautiful contraction drawing the hepatic flexure down with a ballooning above and below. He said he had frequently used as much as a gallon or two of water for enemas, he would pass one-fourth or one-half of this amount, then within a half hour he would have sudden pain with a rush of fluid and would expel the remaining part. The operation showed an ulcer just ex-

actly as the X-ray operator had shown it.

Another case recently showed very similar results, but the patient would not accept the diagnosis. She refused to believe that she had had an appendicitis for ten years. The plate showed the injection of the appendix producing a kinking inward of the cecum, a drawing around of the terminal ileum, with the tip of the appendix adhered to the mesentery. The diagnosis was positive and the operation showed the condition exactly as the plate.

Another case of gall bladder trouble with persistent stomach symptoms showed the pylorus drawn over the gall bladder and attached, as the paper said, in a semi-circular manner. The lesser curvature was rather distorted. The operation showed exactly the same condition.

I believe, as the essayist has said, that this affords a valuable field for diagnosis, and particularly for further investigation.

DR. DAVID ROSS (Indianapolis): It certainly is encouraging to see the progress that Roentgen ray diagnosis has made in the last few years. It seems only yesterday that Doctor A. M. Cole said to me, "Do you know they are telling us that with the aid of the Roentgen ray we will be able to diagnose cancer in its incipient stages, or at least give such corroborative evidence that diagnosis will be possible?" It seemed wonderful to him, although he had been working along that line and doing good work. And so it comes to each of us from time to time, the new things that are being shown with the X-ray. However, we do not want to make the mistake of feeling that we have in the X-ray a complete means of diagnosis. The Roentgenologist does not claim that, he does not want that. It should fit into the whole picture and be corroborative. It is not right or fair that we send a patient for X-ray examination without any statement of what has been found by clinical observation and study. Neither is it fair after the Roentgenologist has helped us out, to fail to report back to him what we have found on operative procedure. If medicine in its broadest sense is to go where we want it to go, there must be absolutely perfect and complete team work—the Roentgenologist, the surgeon, the laboratory man with his wonderful aids in diagnosis, the internist—we must not forget any of them. It is all one big scheme and we should think as much of these men as they do of us.

DR. CHARLES W. HAYWOOD (Elkhart): It was emphasized at the meeting of the American Roentgen Ray Society last week that the X-ray man should be furnished with a complete clinical history of the case, that he should not be asked to take a stomach picture or a chest picture, or whatever it might be, without a com-

plete clinical history; that he should not be limited to taking just the picture the clinician asks him to take, if he should find something further necessary—that he should use his judgment.

There was a great deal said at that meeting by the men who are doing pneumoperitoneum. These men skigraphed patients in the upright position and the plates showed the liver shadow and the shadow of the right kidney, and in many cases the gall bladder hung between the two shadows.

DR. H. O. PANTZER (Indianapolis): I wish to endorse fully what has been said in praise of the wonderful progress made by the X-ray as shown by Dr. Kirklin's plates, and then especially to emphasize what is of fundamental importance in their reading, though not yet fully appreciated. Every one of the X-ray pictures presented to us—and I wish time allowed that I might point it out particularly in each—shows gross anatomical irregularities in form, size, location, and interrelation of the different organs presented in the pictures. Obviously such anatomical irregularities must include disturbances of function, and secondarily become seats of infection. Such recognized disease entities as cholecystitis, appendicitis, intestinal obstruction, pancreatitis, etc., should be regarded as final critical developments. They must have been preceded by clinical symptoms of sufficient gravity and mark which in future cases with the illustrative adjuvant of the X-ray we may detect before the acute crises arise. Then the surgical anticipation of the critical stage will make for safety of surgery, and also will obviate the more or less continuous loss of function and systemic strength which do occur in the long years leading up to a final crisis. Too, the simple removal of the gall bladder, or appendix, or gastric or duodenal ulcer, etc., in many cases is not followed by satisfactory relief of the pre-operative suffering. This, I have become convinced, can be changed by the simultaneous operation upon anatomical irregularities owing to peritoneal bands and membranes. I have practiced this more extensive surgery through many years with ever growing confidence. May I be permitted here to state that when Jackson reported his first case of membranous compression of the ascending colon, in which he determined that the whole ascending colon required removal, and had practiced this procedure, I had operated successfully upon several such cases by the simple discision of such membranes and bands.

DR. ALFRED S. JAEGER (Indianapolis): It is needless to compliment the essayist on the beautiful pictures he has presented—they show for themselves. Nor is there any need to discuss what the X-ray shows in checking up a diag-

nosis. But the X-ray frequently does more. It corrects us in diagnosis. Where the clinical symptoms point, we will say, to appendix or gall bladder, the X-ray will show the gall bladder and appendix normal. As for instance, two years ago a patient presented herself to me who had been operated for appendicitis, but the operation gave no relief. She had the distinct clinical entity which so frequently goes with gall bladder colic. In view of the fact that the appendix had been removed, there was a possibility of post-operative adhesions. Gastric analysis was negative; palpation was negative. We had her X-rayed by Doctor Beeler. The gastro-intestinal picture was absolutely negative. Then we thought of impacted stones, a kink, a thickened ureter at the site of the appendix, possible pressure of some foreign body on the gall bladder. The wizard of the cystoscope, Doctor Erdman, did the preliminary work of injecting the ureter and kidney, and when he came to the point where she had complained of pain at the level of the operation scar he said, "We have an obstruction of some kind there." He was able to overcome the obstruction and make a passageway and inject the pelvis of the kidney, and the picture then taken showed the kidney had changed its position and was pressing on the gall bladder and there was a thickening at the level of the appendiceal site. We did a fixation of the kidney and the gall bladder symptoms were relieved. However, her condition was not sufficiently good at the time of the operation to allow us to take the chance of going into the abdomen for any further work, and that pain still remains. But here was a case where the X-ray set us right, showing that we did not have gall bladder trouble but some other condition which caused the trouble.

DR. B. R. KIRKLIN (Muncie): I wish to emphasize what Dr. Ross has said, namely: That we should not depend upon the X-ray alone to make a diagnosis in every case. I do think, however, that the X-ray is as important as any other one thing in making a diagnosis of a surgical abdomen. It has its place, but there are other adjuncts equally as important.

I also want to agree with what one doctor has just said concerning the Roentgenologist being furnished with a complete history in every case referred for examination. It is my practice that if the physician referring the case does not furnish us with a complete history, then we get the history ourselves. I do not believe that we are stepping on the family physician's toes in asking for, or taking a complete history in every case. In fact, it seems to me that the Roentgenologist should consider himself a medical consultant, for in so doing he is better

able intelligently to interpret all his Roentgen findings.

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THE PHYSICIAN "THE MEDICAL SOCIETY"*

BY

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One can only speculate as to when the first Medical Society was organized. The high attainment of medicine in the days of Hippocrates justifies the belief that conferences must have frequently occurred amongst his followers. It may also be assumed that the contemporaries of Galen were wont to meet and discuss medical problems. During the reign of the dark ages and the period of the alchemists there was no attempt at organization worthy the name.

The advent of Baconian philosophy brought a new birth of scientific initiative. Deductive reasoning not merely laid substantial foundations for progress, but builded upon them new superstructures—remarkable first because so different from what had preceded, and equally remarkable because of the builders who wrought scientific miracles. In this category were the discoveries in physics by Galvani, Volta and Franklin; and in chemistry those by Priestley, Watt, Dalton and Davy, which set the world aflame with expectancy.

Medicine shared in this golden era of scientific progress, producing also many great characters. Among these were Malpighi, in Italy; Borhaave and Haller, in Germany; Paré and Laennec, in France; Sydenham, Harvey, Hunter and Jenner, in England; and Rush, in America.

During this extraordinary period of scientific awakening in the eighteenth century, there is abundant evidence to show that there was the liveliest interest in the newer medical problems. Promulgated views and controversies (often most bitter in character) generally took the form of a book or pamphlet; or of manifestoes from medical schools, for most of the medical leaders were either teachers or favored by royal patronage. Under this wholesome, at times acrid agitation, the profession gradually freed itself from the domination of ecclesiastics, bar-

*Ninth of a series of articles by Dr. Wynn which will appear regularly in *The Journal*.

bers and uneducated midwives. The older order of instruction under private preceptors, gave place to better organized medical schools where the fundamental branches were systematically taught. The close of the eighteenth century saw a goodly number of noteworthy medical colleges established in Europe, England and America. In our own country before 1800 there were four such institutions, which have continued down to our own day.

One of the widespread tendencies of the time was the disposition to form organizations for friendly intercourse and mutual improvement. The same ferment which was working out democracy in the new world, was bringing about different reactions in the Old World; stimulating scientific investigation, arousing the moral consciousness, and bringing to pass a more friendly co-operation amongst men.

Out of such an atmosphere arose a widespread disposition to organize societies with the avowed objects of promoting friendly intercourse amongst scientific workers, and stimulating advancement in the basic sciences—medicine included. Such were the German Scientific and Medical Association, founded in 1652; the London Royal Society for the Promotion of Science, 1662; the Academy of Sciences in France, 1665; and the Academy of Medicine, 1820; in America, the Massachusetts State Medical Society, 1781, and the Philadelphia College of Physicians and Surgeons, in 1787. These organizations continue an honorable existence, fulfilling in the highest degree the noble aims and purposes of their founders.

It will be noted that these first attempts at medical organization were amongst the notables of the time—the writers and teachers of medicine. It was in no sense a widespread effort to organize the mass of the profession for purposes of friendly intercourse and mutual instruction. The medical society as we know it is a product of modern times—one of the fruits of the diffusion of knowledge and the spread of democracy. In the very nature of things, therefore, medical organization of the rank and file of the profession has attained larger growth in America than anywhere else in the world.

The first noteworthy attempt in Europe to organize the medical profession in a larger, democratic sense, was in 1832, when the Provincial Medical and Surgical Association was established at Worcester, England. Under the leadership of Charles Hastings, fifty medical men from the leading provincial towns of England assembled and perfected this organization. In 1856 its name was changed to that of British Medical Association, a title which it has borne to the present time, attaining by its growth and influence, world-wide distinction.

At the same time that general organization

of the medical profession was taking place in England, a similar movement was on foot in America. During the first half of the nineteenth century, medical colleges and pseudo-medical colleges had multiplied to an unwarranted extent, flooding the country with doctors, far in excess of the need of the time. Some of these institutions were mere diploma mills, conferring degrees which legitimized the holders in the public mind, but which were highly discreditable to the profession. Better men in the profession everywhere deplored the evil trend and sought to bring about its correction. This sentiment crystalized formally in 1845, when under the leadership of N. S. Davis, the New York Medical Society adopted a resolution issuing a call for a national convention of delegates from all the medical colleges and societies throughout the Union. They assembled in New York City May 5, 1846. Thus was born the American Medical Association. Its remarkable growth all these strenuous years has been along almost the exact lines set forth in the six propositions of reform, promulgated by its illustrious founders. This much in brief historic review.

A consideration of medical society growth in quite recent years reveals interesting features. As previously stated the earlier organizations naturally brought together the more progressive leaders in medicine, chiefly teachers and writers. The high conditions of admission made the prevailing organizations rather exclusive in membership personnel. This type of society exists today in the Philadelphia College of Physicians, the American College of Surgeons, the American College of Physicians and the numerous organizations of those engaged in special work. Such societies are extremely important in promoting scientific researches, technical improvements and advancement in the methods of practice. The newest things are brought to these forums for searching and unsparing criticism. The most acute and painstaking workers find their wits sharpened and their knowledge improved. Errors are laid bare and truths made plain.

So beneficent for good are these medical associations of specialists that one hesitates to suggest the possibility of any faulty trend in their influence. Yet such there are. Not a few of those engaged in this sort of society work develop an attitude of self-sufficiency and class superiority, occasionally so offensive as to merit the term arrogance. They become Pharisees in medicine, walking by on the other side of the road and disdaining the company of the common folk in the profession. They select only the company of the elect in science. They are generally persons of fine but exclusive mentality. Curiously they are slow to learn that their pet, new ideas may grow best in the less

tilled fields of the common profession. This fact was borne in deeply upon the writer in his long connection with the Scientific Exhibit of the American Medical Association. At first there were many scientific investigators of the highest distinction, who were very loath to descend from their high station as research workers. To their way of thinking scientific demonstrations of research exhibits to the untutored practitioner would not be understood and what would it avail? Yet when once they came down from the mountaintop of isolation and exclusiveness, into the fertile valley of common practitioners, they were surprised to find a soil in which their ideas flourished.

Who is so prejudiced as to deny to specialism chief credit for modern progress in medicine? Just as certain is it, however, that specialism is not an unmixed blessing. Besides depleting to an alarming extent the ranks of general practice, its trend is toward materialism. It brings about narrowing of the professional vision. It often fails to observe the disease complex in its entirety and coordinate the particular lesion with the functioning organism as a whole. Such are some of the pits of error into which the specialist is apt to fall. His protection and salvation lie in frequent contact and discussions with practitioners as he encounters them in the general medical society.

In this connection it is proper to discuss the relationship of medical college faculties to local medical associations. Nothing could be farther from the writer's intent than condemnation of American Medical Colleges which at the present time are probably the best in the world—thanks in large measure to the activities of the American Medical Association. The purpose is to point out a prevailing condition which is prejudicial to the best interests of the profession in general. In almost every city where there is a well-manned and equipped medical school, there is likely to be found a college and non-college group—the “ins” and “outs,” sometimes referred to as the aristocrats and plebeians. This line of cleavage is quite apt to show itself in medical society politics. Those in the common walks of practice are perhaps too prone to view the college professor as a Pharisee, robed in exclusiveness like the holder of public office or the arrogant rich. Sometimes the criticism is just; more frequently it is far-fetched. There is no justification for the tendency often manifest in this connection to draw class distinctions in the profession. Is it not true that the vast majority of new things in medicine find their origin amongst the research-workers, the writers and teachers of medical faculties? Captious criticisms of them, therefore, by other practitioners who have not college connections

is undignified and unworthy the profession. Likewise loose criticism by the college groups, of the rank and file of the profession, is uncalled for and prejudicial to the best interests of medicine. The practitioner at the bedside is engaged in a noble calling, no less than the lecturer in an amphitheater or laboratory. Both are necessary; each needs the other. Of what avail is the investigative work of laboratory men and teachers, if not brought to contact with the practitioner for try out? Nor is the great democratic majority of the profession to be excused from the application of strictly scientific methods of clinical observation—work fully as important as that conducted in the hospital ward or laboratory. The epochal investigations of Sir James McKenzie on auricular fibrillation were carried on while a country practitioner. Listen to his own words: “I may be excused if I insist upon the fact that all the essential details associated with this condition (auricular fibrillation), its symptomatology, its relation to heart failure, its response to digitalis, were all discovered by the simple means available to the doctor in general practice. Moreover, and this is the point which I wish to make, the recognition of this condition as a clinical entity and all it implies, could not have been made out by investigators, however capable, if they had restricted themselves to laboratory or hospital ward.” This much in argument to show the great need of frequent and friendly contact between the so-called scientific and practical groups in medicine. Their co-operation and reaction upon each other are most needful to insure the best conditions of progress. Toward the consummation of this laudable end what agency is so powerful for good, as the general medical association?

This is what may be characterized as the democratization of medicine. The better spirit of the profession has proclaimed from time immemorial absolute freedom of medical thought and unselfish sharing, one with another of all the discoveries and inventions which bear upon medical progress. No influence has contributed more toward the democratization of the finer things in medicine, than the American Medical Association. It has been the scientific and social leaven which is gradually leavening the whole lump. Fortunately from its birth, to the present time there has arisen from its vast popular membership a wise directing and controlling influence. As out of a heterogeneous citizenship has been born a wise nationalism, husbanding the highest ideals of the Republic, so in this great medical democracy has arisen a beneficent and dynamic force, making for the realization of medical ideals for the medical masses.

The very magnitude of this great national

body and kindred organizations limits the papers and discussions to the leaders and teachers in medicine. The vast majority attend to look and listen; not to be heard. They visit the Scientific Exhibit, examine specimens and apparatus, listen to demonstrations, and are content with asking questions. The papers and forensic controversies interest and instruct. To the average man, prone to get into a professional rut, these experiences are valuable, not so much from the facts inculcated as the stimulus given to larger reading and more careful study of cases. Thus year after year the great host of common soldiers in the medical army attend the American Medical Association. They constitute the great silent but sober, thinking majority. They are loyal and content to be led by the captains and generals of medicine.

In this connection it is a question most pertinent to ask, is there not some way in which this silent majority, the people of the medical republic may more frequently express themselves? May not some of them prove heroes if but given a chance? Do the choicest wild-flowers bloom by the well-trodden path or in secluded places? Is it not often so of men? Did the obscurity of Nazareth hinder the birth and development of the greatest humanitarian of the ages? The most illustrious commoner and the greatest generals of the American Commonwealth grew from obscurity. Not less true has it been of medical heroes.

It is not then a debatable question as to the advisability of drawing upon this great reserve of medical possibilities—the vast, silent army of general practitioners. The only question is how it may be done to the best advantage. At first thought one is appalled at the magnitude of membership and prone to conclude that nothing can be done. How far from the truth! One needs but to think of the plan of organization of the American Medical Association, and at once a solution dawns upon him. The primary unit of organization is the County Society, where men and problems are thoroughly tried out, and when really found worth while are brought up to the State or National Organization. The preliminary tests are at home; the finals at the State or National meetings, where critics measure lances, and the unworthy perish before the wise and the strong.

The county or local medical society, therefore, constitutes the fundamental unit of medical society organization. It is the universal, post-graduate medical school of the practitioner. He should cherish and support it with an affection as deep as the love which the true citizen has for the public schools. The profession has not fully awakened as yet to the value of the Medical Society. Membership is not merely a duty; but rather a perpetual opportunity and

delight. For the great mass of the profession it is infinitely more important than the State or National body. To every conscientious and progressive physician it should be as sacred as the church is to the devout religionist.

The county or local medical society stands in the relationship of parent to all other organizations. It furnishes, so to speak, the home in which all medical children have welcome, and should return again and again to render an accounting of their achievements. Such are the associations of specialists, the college seminars, clinical and hospital associations, pathologic societies, reading clubs, etc., etc. By association in smaller groups of those interested in particular lines, concentrated and intensive effort, often achieves better results. This, however, does not destroy in the least the main point of contention, namely, that any noteworthy work accomplished should be presented finally before the general medical association. In this way is brought about the proper balancing of medical activities. Besides intellectual betterment there arises that community of interest and coordination of effort, which makes for the higher advancement of the profession.

Too often the practitioner takes the view that with graduation his education is finished. What an erroneous conclusion! His entrance upon practice marks merely the beginning of the study of clinical problems. Methods in their management will change; new ideas will come along. How can he best keep pace with progress as related to the best there is in medical practice? He needs, day by day, instruction in the newer things indicative of medical progress. This he will obtain in part from medical reading, but more from the medical society, which becomes the forum where the recent and best is constantly brought to the practitioner's attention.

The conventional program of the average County Medical Society consists of an essay or two, with assigned discussants. Frequently these are largely compilations from recent texts. This is chiefly advantageous for the essayist, causing him to refresh systematically his knowledge of the topic under consideration. To those who listen it has less value but is productive of good. Careful review of the Journal literature with comments will add immensely to the value of the presentation. Not infrequently the greatest benefit comes from full and illuminating discussion. And right here is one of the most neglected fields of usefulness in the medical society. Fortunate indeed is that society which has been able to cultivate an atmosphere for good discussions. Members should be informed in advance about the subjects which are to be presented. Then each should feel it

incumbent upon himself to read up on the topics; and after digesting this material, and consulting his own experience, come to the society with a well organized discussion to present. Such discussions have substance and body. They often set wrong positions right, and may in their ultimate effect produce a deeper impression than the paper in chief.

The report of cases is a plan often adopted. This is capable of great usefulness as it also is of great abuse. The danger is of desultory presentation of incomplete or rambling data. An unusual case with clinical charts, laboratory findings, a brief review of the recent literature, with presentation of a specimen or the exhibition of the patient—make the report valuable for instruction and a credit to the reporter.

The careful demonstration of pathologic specimens, whether post-operative or post mortem, is always instructive. Drawings, photographs, microscopic sections, add greatly to the interest. Where practicable, clinico-pathologic conferences are most illuminating and helpful. The clinician first presents all the clinical data with argument upon which diagnostic conclusions are based. Independently the pathologist reports his findings, corroborating or disproving the diagnosis of the clinician.

The plan originating some years ago in Kentucky, of instituting courses of systematic post graduate study, in the county medical society, has been tried out with varying degrees of success. Elaborateness of attempt has generally been the millstone which has dragged the effort to its death. Theoretically it sounds easy to parcel out a series of preparatory tasks to a considerable number of men in a society, and expect that each should present his topic as a quiz, demonstration or exposition, at the weekly or monthly meeting. But in practice it does not work out satisfactorily. The chief difficulty is that men, however well disposed, are rarely gifted as teachers. Nor is this to be construed as a reflection on their ability. A few will do the assigned tasks well. Others make halting attempts, lapse in attendance, lose interest and finally drop out entirely. And some will fail utterly. Hence, however praiseworthy the idea, experience seems to have proved that it is the part of wisdom, not to undertake too wide a scope of endeavor.

Instead of attempting to cover the whole realm of medicine, let the circumstances of the time or place suggest the line of study and investigation. At one time it may be a prevailing epidemic of typhoid fever. To one is assigned a historical sketch of the disease; to another its bacteriology and serologic diagnosis; to a third its morbid anatomy with presentation of specimens; a fourth considers symptomatology; a fifth, its management; a

sixth, complications; a seventh, the local water supply. This would insure not only a very complete review of the literature of typhoid, but promote in a large way public interest in preventing the disease. The study of epidemiology, occupational diseases, problems of hygiene and public health, of work in relation to the cause and cure of cardiovascular disease and tuberculosis, of diet in Bright's disease and diabetes, but give inklings of the great problems which might be taken up systematically by co-operative medical society effort. It is toward the encouragement of just this sort of investigative work that the National Research Council is now directing its energies.

One of the constant functions of the local medical society should be to stimulate reading and study of current medical literature. For example if there is some particular subject in medicine which is attracting wide attention, let this be taken up by the society. Assign to members the duty of preparing reviews of the most recent texts dealing with the question at issue. Let others cull the recent Journal literature, submitting a resume of the articles read. This, of course, presupposes the availability of files of medical journals. Where a medical library is not available, it should be the duty of the medical association to equip itself in a co-operative way. This, of course, will be best accomplished if a room in common, with telephone and attendant is maintained, where journals and medical books of unusual nature are kept. In this manner the scientific morale of the society is greatly enhanced and good-fellowship encouraged.

Finally nothing is more important at the present time in the evolution of the medical society, than the encouragement of friendly co-operation among physicians. The era of professional selfishness is passing. A rising professional sun is shedding the light of wisdom in dark places. Its warmth is dispelling the gloom of suspicion and bringing forth the choicest flowers of friendship. Its rays are penetrating the soil in which the tree of medical knowledge is planted, making it to spring forth and bear good fruit abundantly.

(To be continued)

THE SUTURE OF PERIPHERAL NERVES*

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The suture of nerves is not a new thing. It has been brought to the fore both clinically and experimentally by the late war. The report by

* Presented before the Indiana State Medical Association at the South Bend session, September, 1920.

Adson, however, of forty-eight cases operated upon at the Mayo clinic, having an average duration of twelve months between date of injury and surgical repair, shows that it is a problem to be met in civil life as well as in war. Many cases, I venture, partially disabled from a neglected nerve injury, might be found in our civil practice. I know of two cases of long standing in the rural environs of my own city.

The purpose of this paper is to briefly lay before you the accepted facts and some of the observations made in twelve personal cases.

When there is a complete severance of a nerve Wallerian degeneration begins in the distal segment and also in the proximal segment up to the first node of Ranvier about the third day following injury and is complete about the twelfth day. There is a granular disintegration of the axon, and the myelin sheath is replaced by droplets of fat.

Without the process of degeneration, regeneration would not be possible. New protoplasmic processes take form from the ruins of the old. The nuclei of the sheath of Schwann multiply and fill the neurilemma proximal to the last node of Ranvier and in the entire distal segment. Nerves without neurilemma do not regenerate. These protoplasmic bands appear about the sixteenth day (Lewis), throughout the distal segment. These bands bridge over the gap between the severed nerve ends. The neurofibrillae are sent out by the axon and follow the protoplasmic bands. When the gap is too great to be bridged by the protoplasmic bands, the fibrillae are caught in the scar and form the neuroma verum. In ununited nerves the proximal end usually has the largest bulbous end.

Ranson has stated the mechanism of regeneration of nerve fibers as follows:

1. Proliferation of axons in central stump.
2. Penetration of the new axons through scar.
3. Utilization of the protoplasmic bands as pathways for the new axons in the distal segment.

In examining for a possible break in the conductivity of a peripheral nerve the diagnosis and localization of the point of break depends on the muscle or group of muscles affected. Injury of the N. ischiadicus causes a loss of all movement of foot and toes and loss of flexion of knee by biceps, semi-membranosus and semi-tendonosis. If the injury is below the upper part of the middle third the branches innervating the knee flexors usually escape injury.

Lesions of the N. tibialis result in the loss of (a) plantar flexion of foot by gastrocnemius, (b) all flexion of toes by flexor digitorum, flexor hallucis and flexor digitorum brevis, (c)

supination by tibialis posticus. Those of the N. peroneus produce a loss of all dorsal flexion of foot by tibialis anticus, extensor digitorum, extensor hallucis longus and all pronation. Injury of the N. cubitalis produces a loss of extension of knee by the quadriceps. If the injury is extremely high it is possible to effect the innervation of the Iliopsoas resulting in the loss of flexion of the thigh to a sitting posture. Injury to the N. musculocutaneous gives a loss of flexion of elbow (biceps and brachialis), some function may persist, however, from fibers of the N. radialis. Lesions of the N. radialis in the axillary space result in (a) the loss of extension of lower arm (triceps), (b) extension of hand and proximal phalanges, (c) abduction and extension of thumb as far as the abductor and extensor pollicis longus are concerned. If the injury is below the elbow the function of the supinator longus may not be impaired.

With the anatomic distribution of the peripheral nerves well in hand it is comparatively easy to determine the nerve involved and the location of the offending pathology, even without the external evidence of trauma. But to decide offhand whether there is a break in the continuity of the nerve fibers or simply an impairment of conductivity is oftentimes hard to determine, even with positive reaction of degeneration. If the injury is of long standing, trophic disturbances may appear but they vary with the nerve involved.

Pain at the site of injury may disappear in a few hours after injury and reappear days later as the fine fibrillae become ensconced in tightening cicatricial elements. The pain may be referred to the distal points of distribution of the severed nerve. Sensation often returns partially, even while paralysis persists, due to the fine anastomosis of fibers from adjacent nerves.

The earlier nerve injuries come to operation the greater will be the per cent of re-established function. Wilms, with his unquestioned authority, insists that nerve injuries should be operated within the first fourteen days and that if the diagnosis is not clear at this early stage an exploratory incision should be made under local anesthesia and the diagnosis made. The cases which allow even so early an exploratory incision are, however, the exception. Most of the cases of nerve injury are complicated with an open infected wound, or a fracture, or both. Borchardt also advises immediate operation in those cases presenting the characteristic symptom complex of a total absence of all nerve function. Hezel does not operate until three to four months have elapsed after injury.

Many cases where the injury to the nerve

stem is merely a contusion or pressure exerted by traumatised adjacent tissues return to normal without operative interference, while others go on to a secondary scar formation, the severe symptoms of which respond only to operative methods. Two of my cases were of this type. One was a heavy scar enveloping the ulnar and median nerves. The patient complained of severe burning and gnawing pain in the hand and fingers which had become gradually worse. He could not sleep and carried his hand in a cotton pad. The other case was a small bone spicule bound to the sciatic nerve high in upper third causing an unbearable pain in the leg and foot. The neuroma involved only the perineurium in these cases and was contracting on the nerve fibers. The scar was dissected away and fat flaps interposed. The pain disappeared immediately and the patient began movement of the injured part the following week.

The above cases showed very slight, if any, microscopic injury to the nerve fibers. The spindle-shaped scar was not a neuroma verum but was composed of epineurium and other connective tissue elements of the nerve stem. There was marked change in circulation of the nerve at the point of pressure or contusion. Injury of the vaso neurotaum and the retarded return of the lymph and blood resulted in the accumulation of elements rich in fibrin with infiltration of the epineurium.

Retrogression takes place in the tissues at the site of injury. The curtailed blood supply and the constriction of the surrounding cecatrix tissue leads to atrophy of the more highly specialized nerve fibers. Chronic infection or trauma with irritating foreign particles or the presence of fibrinous exudates and necrotic tissue are stimulants to the highly developed proliferative power of the connective tissue. In the cases cited the symptoms were the result of the slowly contracting scar upon the nerve fibers. Had from four to six months elapsed before operation, it is reasonable to assume that a complete degeneration of the nerve would have ensued and partial resection and suture, at least, would have become necessary. When there is a complete severance of the nerve, either from the primary injury or from the resection of a neuroma, an attempt must be made to coapt the ends, or if the defect is too great, to introduce some method that will afford support and direct the outgrowing fibrillae to the distal segment.

In all of my cases an end to end union was accomplished. This is true of the great majority of nerve injuries. Great care should be exercised in dissecting the nerve ends from the scar tissue enveloping them. The task is lightened if the incision is ample to reach the nerve

stem in its normal portions, both above and below the injury. The perineurium is split and easily lifted from the normal nerve until the injured portion is reached. If normal salt is injected beneath the perineurium it is ballooned out and lifted from the stem. The dissected sheath will disclose that an apparent nerve thickening exists only in the surrounding scar. The incision in the perineurium liberates the traumatic exudate following suture and the pain and symptoms of neuritis are not so frequent. Forceful flexion of the joints with the freeing of the nerve stem both above and below will allow of a clean coaptation of the severed nerve ends without tension in a great majority of cases where the defect is as great as three centimeters. If this does not suffice, spiral incisions of the perineurium may be made or transplantation of the nerve stem.

The upper and lower segments should not be disturbed, however, any more than is absolutely necessary for coaptation. The finest catgut sutures are used. Side stay sutures are used in preference to the enveloping stay suture. The line of suture is covered with muscle, fascia or fat flaps. Hæmorrhage should be carefully stopped. The Esmarck tourniquet should not be used because of the danger of secondary hæmorrhage and trauma to the proximal segment.

When the defect is too great for coaptation other methods have been devised to bridge over the gap and give support to the outgrowing fibrillae. Vanlair in 1882 used a decalcified bone tube through which the central stump could regenerate to the peripheral one. The rubber tube (Ehrman), magnesium tube (Payt), formalin hardened Calve's artery (Foramitti) have all been tried with uncertain results. Kaellher used catgut suture swings to bridge the existing defect and tubulized the swing with prepared Calve's artery. He decided that the tube hindered the nutrition of the enclosed part and that the swing suture alone was an essentially better method. Von Oberndorffer in 1907 reported nine cases of tubulization and suture a distance with uniformly poor results. Nerve grafts and flaps have not proved a success.

In my series of cases, three were of the musculo-spiral, one of the median, three of the sciatic, one of the tibialis, and three of the peroneus. The three musculo-spiral and one of the sciatic cases were complicated with fracture. These cases were all operated within the first six months of injury. About seventy per cent return of function was obtained at the end of a year except one. This case was a complete severance of the sciatic in the upper third. The bulbous neuroma was resected and close ap-

proximation was secured. This was one of the first cases and probably not enough of the scar was resected. There was not the slightest return of function at the end of ten months, at which time I lost track of the case.

The post operative care in these cases is very important. Splints should be used to keep parts supplied by the injured nerve in a corrected position. The splints should be removed two or three times a day and massage given. Electricity and hot-air should be introduced fairly early.

CONCLUSIONS

Nerve injury is fairly frequent in civil practice and all injuries of the extremities presenting penetrating or perforating wounds, and all fractures should be viewed with the possibility of a complicating injury to the nerve. If the diagnosis is not absolute and infection is not present, an exploratory incision should be made under local anaesthesia.

The earlier the repair, the greater the per cent of returned function.

INCOME TAX

Single persons, though required to file a return if their net income for 1920 was \$1,000 or more, are, if they are the heads of families, granted a special exemption under the revenue laws. Such a person is defined by treasury regulations as "a person who actually supports and maintains in one household one or more individuals who are closely connected with him by blood relationship, relationship by marriage or by adoption, and whose right to exercise family control and provide for these dependent individuals is based upon some moral or legal obligation." Such persons are allowed the exemption of \$2,000 granted a married person. In addition, they are allowed a credit of \$200 for each dependent under 18 years of age or incapable of self-support because mentally or physically defective.

A married person living with husband and wife cannot claim an additional \$2,000 exemption as the head of a family. His or her exemption is based upon the marital status, irrespective of the support of others living in the same household. The additional \$200 credit for dependents does not apply to the husband or wife of a taxpayer. For example, if a married man supports a father who is incapable of self-support, he is entitled to the \$200 credit for such person. If through force of circumstances he supports his wife away from home he is entitled to the \$2,000 exemption allowed a married person, but not to a \$200 credit for a dependent.

A son who has left home but who sends his mother more than one-half the sum required for her support is entitled to the \$200 credit, provided the mother cannot support herself. Otherwise, the amount must be considered as a gift, and, therefore, the credit is not allowed. A son living at home and supporting his father, mother, or other relative may claim the \$2,000 exemption allowed the head of a family, but not

the \$200 credit unless such relative is under 18 years of age or incapable of self-support.

* * *

INCOME TAX IN A NUTSHELL

WHO? Single persons who had net income of \$1,000 or more for the year 1920; married couples who had net income of \$2,000.

WHEN? March 15, 1921, is the final date for filing returns and making first payments.

WHERE? Collector of Internal Revenue for district in which the person resides.

HOW? Full directions on Form 1040A and Form 1040; also the law and regulations.

WHAT? Four per cent normal tax on taxable income up to \$4,000 in excess of exemption. Eight per cent normal tax on balance of taxable income. Surtax from 1 per cent to 65 per cent on net incomes over \$5,000.

* * *

Work has begun on the collection of the income tax for the year 1920. Uncle Sam, through the Bureau of Internal Revenue, is addressing to every person in the United States the question, "What was your net income for 1920?" The answer permits of no guesswork. Every single person whose net income for 1920 was \$1,000 or more and every married person whose net income was \$2,000 or more is required to file a return under oath with the collector of internal revenue for the district in which he lives on or before March 15, 1921.

The penalty for failure is a fine of not more than \$1,000 and an additional assessment of 25 per cent of the amount of tax due. For willful refusal to make a return the penalty is a fine of not more than \$10,000 or not exceeding one year's imprisonment, or both, together with the costs of prosecution. A similar penalty is provided for making a false or fraudulent return, together with an additional assessment of 50 per cent of the amount of tax evaded.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

JANUARY 15, 1921

EDITORIALS

CHIROPRACTIC INCOMPETENCY.

No stronger argument can be presented to prove our contention that the chiropractors should not be permitted to treat the sick than the circumstance occurring very recently in the city of Fort Wayne, where the spread of smallpox was traced definitely to the office of two chiropractors who very naturally failed to recognize the disease because never trained to recognize it or any other disease. We are told that the Fort Wayne City Board of Health, with the assistance and approval of the State Board of Health, will prosecute the two chiropractors for being the means of spreading smallpox, as also practicing medicine without a license.

However, the most important phase of this whole question of permitting chiropractors to practice medicine is the danger to the public, as the episode to which we call attention clearly points. It is the height of inconsistency to argue that chiropractors, many of whom have not even an ordinary common school education, none of whom are required to have much preliminary education, and absolutely none of whom have any training which will enable them to recognize disease, can be expected to treat intelligently diseased conditions of the human body. A few weeks, or at most a few months, of chiropractic schooling is not sufficient to make a doctor, and if education in any line of human endeavor is worth anything and deserves our support, then thorough education of those who are licensed to treat diseased conditions of the human body is deserving of serious consideration.

It may be contended that the work of the chiropractor does no harm in some diseased or abnormal conditions, but the safety of the public is seriously jeopardized when these ignorant and illy-trained chiropractors are called upon to recognize and treat numerous serious conditions of which smallpox, diphtheria, scarlet fever, typhoid fever, appendicitis, gallstones, syphilis and many others form but a small part. The very fact that the chiropractors are not taught to recognize various diseased conditions, and

could not under any circumstances learn to recognize diseased conditions in the short time that they devote to the study of their peculiar creed, is in itself sufficient to condemn them as unworthy of recognition as practitioners of medicine.

As we have stated before, we have no quarrel with the chiropractors or the followers of any particular pseudo-medical sect as to the manner in which disease shall be treated, but we do say that every person who is given a legal permit to treat the sick and suffering should have a good general education, and supplement that by adequate training in all of the fundamental branches which have to do with an intelligent knowledge of the human body in both health and disease. This knowledge is not secured by a few weeks of indifferent training at a chiropractic school, but must be acquired through a course of study that is none less than that given in our own Indiana University School of Medicine. To give chiropractors recognition is to place the stamp of approval upon ignorance and incompetency, to say nothing of discounting the education, training and experience required of those who are permitted to practice medicine under the present Indiana Medical Practice Act. We do not believe that Indiana legislators wish to be placed on record as defending incompetency and failing to offer adequate protection to the people of Indiana. In reality it is the people who suffer and not the medical profession if chiropractors are given recognition on their present show of training and experience. The spread of smallpox in Fort Wayne is only one example of many that may result in consequence of such folly. In all probability the chiropractors may argue that members of the regular medical profession make mistakes, which of course is true, as no one is infallible, but if regular doctors, who have had two years of academic work at our Indiana University, and then studied medicine in the same University for four years more, can make mistakes occasionally, how infinitely more possible is it for chiropractors to make the most serious and indefensible blunders and mistakes when they are not required to have even a high school education, and many of whom have had but a few weeks of so-called chiropractic teaching and training. If education and experience count for anything at all they count just as much in the practice of medicine as they do in any other vocation of life, and if this is not true then the legislators owe it to themselves and the people of Indiana to frankly state that our Indiana University serves no useful purpose and its doors should be closed.

SALVARSAN FAKES

The inclusion in the programme of the All-America conference on the Great Red Plague, which met in Washington early in December, of a discussion of the use of sundry arsenic "substitutes" for arsphenamine (salvarsan) in the treatment of the plague is highly commended by Surgeon General H. S. Cumming, of the Public Health Service.

"Medical officers of the Service and others concerned," he said, "were especially cautioned last spring against the use of arsenic preparations not belonging to the arsphenamine group and were directed to use only the arsphenamine produced by licensed firms under the rules and tests prescribed by the U. S. Public Health Service.

"Testing of these arsenic preparations is very necessary because of their poisonous nature. If not properly prepared, they may be deadly no matter how carefully they are used or what is almost as bad, may be entirely worthless and may delude those who use them with illusory promises of a cure that cannot result.

"Some of the unlicensed preparations that have been foisted on the market were frauds pure and simple, containing no arsenic or other curative agent at all; but most of these were soon detected and their manufacturers punished. Many of those that are still being made result from efforts to circumvent the rigid tests required by the Public Health Service for the protection of the public and to market substitutes which are sold with unwarranted claims as to their curative value.

"Salvarsan (606) was devised by Ehrlich in 1910 after 605 unsuccessful experiments in trying to find a preparation of arsenic that would kill the germs in the patient's blood without also killing the patient. It was carefully protected by patents, taken out in Germany and elsewhere, that which enabled enormous prices to be charged for it. During the war inability to import it from Germany, where it was chiefly manufactured, caused the United States to seize the patent rights and to authorize manufacture in this country.

"Later, in an effort to standardize the drug and to prevent the sale of worthless substitutes, the name "arsphenamine" was adopted; and licenses for its manufacture were granted by the Treasury Department to all persons who complied with certain conditions that were considered essential for safety and health.

"No one who does not comply with these regulations may call his product "arsphenamine"; but there seems to be no law to prevent the manufacture of substitutes bearing other names and claiming to obtain the same results."

Several firms are now manufacturing arsphenamine and neo-arsphenamine under licenses from the Treasury Department. Every batch of their products is rigidly inspected and tested by the U. S. Public Health Service; and these products alone are used in the various hospitals and clinic of the Service. "We do not consider that any other products have been shown to be sufficiently reliable," says Dr. Cumming. "But the value of arsphenamine is well established."

 THE THEORY AND PRACTICE OF
MEDICINE

From time to time we hear much about the value of a purely vegetable diet in promoting and prolonging good health, and many scientific reasons are advanced to support the claims put forth. Now we are hearing considerable about an exclusive meat diet which has been, through necessity, followed by some of the inhabitants of the polar regions without evidence of harm. We even are told that salt, considered by most of us such an essential in our diet, is entirely unnecessary, and that our taste for it is largely a cultivated one. In fact one of the Arctic explorers not only went without salt for many months because forced to do so, but actually reached the point where food seasoned with salt became distasteful to him. A few years ago the edict went forth that no one should take much fluid with the meals and that water with the meals was decidedly objectionable because it diluted the digestive fluids and inhibited their action. Now we are advised by some of the leading dietitians that taking fluids with the meals, even as much water as desired, is not harmful, but may be beneficial in helping to break up the food and make it more readily subject to nutritional processes. Pie, the distinctly American tidbit, has been considered for many years a fruitful cause of "dyspepsia", but now investigations and experiments by some well-known dietitians seem to prove that not only is pie, as found upon the better class of American tables, unproductive of harm when consumed by the healthy individual, but really possesses more nourishment than usually accorded it. Thus do our ideas and our pet hobbies change, and even those that presumably are backed by scientific logic turn out to be fallacious because they are largely theoretical, and have not been tested in the school of practical experience. All of this reminds us that we have too many medical men who are wrapped up in theory and who give too little attention to the purely practical side of the practice of medicine. What we need in our medical schools is not more laboratory teaching, even though such

teaching is an absolute necessity in furnishing adequate knowledge to the medical student, but we need more practical bedside training in the diagnosis and treatment of disease through a careful analysis of cause and effect as found in the patient himself. It is, therefore, a great step in advance that has led to the limitation of matriculation in our better medical schools, and a division of the classes into small sections so that each and every student shall have individual instruction coupled with an opportunity to work out for himself the intricate problems of diagnosis and treatment upon the patient. A further step in advance is the adoption of a fifth or hospital year as part of the medical training before a diploma is granted. This fifth or hospital year should be made eminently practical, and the student should be given entire responsibility in the management of cases, though constantly under the check of his superiors. Theory is all right when it is proven up by experience, and what we need most in our medical colleges today is not only thorough preparation of students in the fundamentals, and schooling in the theory of our science, but an increased amount of practical training in the application of the theory. We are beginning to realize this desired change in our system of education through the lengthening in the medical courses in our better medical schools, and an increase in the hospital facilities connected with those schools.

EYE DISCOMFORT FROM IMPROPER LIGHTING CONDITIONS

The eye specialist frequently meets with patients who are decidedly uncomfortable at near work in spite of the fact that the general health is good and that appropriate glasses are worn for the correction of any refractive error. Not infrequently the cause of this ocular discomfort can be traced to faulty light conditions under which the patients are working. Many people labor under the delusion that if a little light is good, more is better, and in consequence we find eye work being attempted under powerful artificial illumination, and even admitting that the light is coming from the proper direction its intensity is too great for continued comfort. Furthermore, it is very strange that in so many business houses, professional offices, and industrial plants the illumination is obtained from above or directly in front of the worker, when as a matter of fact every eye specialist and every illuminating engineer knows that such an arrangement is radically wrong and is liable to produce great discomfort for those who work under such conditions. It cannot be emphasized too strongly that light should come from the left and behind in order to avoid the disagree-

able glare that is so irritating to any eyes. This is as true in obtaining natural light as it is in obtaining artificial light. Employers of labor ought to take this fact into consideration when furnishing light for their employees, and any physician who may be puzzled as to his inability to relieve eye discomfort may find a solution to his difficulty by investigating the light conditions under which his patient is working, and determining to his satisfaction that the light, whether natural or artificial, is not coming from immediately above or in front of the worker, and, is not too intense.

NURSING BY TRADE UNION METHODS

No person can afford to be sick, but the average family is almost bankrupt when forced to pay a trained nurse the present rate of fifty dollars a week and board, to say nothing about the doctor's fee and incidental expenses. And the worst of it all is that many of the trained nurses are not rendering the services that they should render. They are acquiring the attitude of so many of the laborers in trying to get the highest compensation and yet give the least in return for it. Not a few of them lose track of the humanitarian side of their work, and no matter what the circumstances they are refusing to be on duty more than a few hours at a time and they designate their duties, when the hours shall be, and if the case requires much attention they insist that there shall be two nurses on the job. Another nasty trick which some of the so-called best trained nurses are employing is to refuse everything but the easy cases, and, worse still, to refuse to take even those unless in the hospital. We have known of numerous instances where patients desperately ill with an infectious disease were unable to get a single nurse out of a half dozen or more who were idle and waiting for a job. There are some nurses who, like the doctors, go whenever called and with no questions as to the character of the case or whether or not the patient can afford the ordinary conveniences; but it is lamentably true that not a few of the trained nurses have lost sight of the humanitarian side of their work entirely. In this connection perhaps a word of criticism of the hospitals is justified in view of the fact that in so many of them it is getting to be a rare thing to find the floor nursing that prevailed a few years ago. It not infrequently occurs that if a hospital case requires anything more than the most ordinary care, the patient is advised that he ought to have a special nurse. No doubt the hospitals are in a measure excusable on the ground that they are crowded, and that there is a scarcity of nurses in training, but irrespective of that, there is a tendency on the part of not

a small percentage of the nurses, both in and out of hospitals, to give less service than formerly, and it really is deplorable in view of the necessity for good nursing care for those who are sick. As a general proposition people, even those who are sick, do not object so much to what is paid for service if they obtain real service, but it is decidedly unfair to pay for service and not get it. Under no circumstances do we intend to include all trained nurses in this criticism, for we know that there are many who are living up to the highest ideals of the nursing profession, but there are so many who are not doing so that we feel that the nurses as a class should purge their ranks of those who are beginning to disgrace the nursing profession by practices that are no better than those of the worst trades unions.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

To urge payment of medical society dues should be a superfluous effort, and yet we know that there are some doctors who are inexcusably negligent, so while the matter is brought to your attention make it a point to escape being numbered among the delinquents on February 1.

THE copies of the revised Constitution and By-Laws have been received from the printer, and one copy is being sent to each of the newly elected county society secretaries. Any other society officer or any member who wishes a copy may secure one by addressing Secretary Combs at Terre Haute.

DOCTORS, like everyone else, are being bombarded with circulars offering wonderful (?) chances of getting rich by investing in various enterprises, and last but not least are the very alluring solicitous letters which convey the news that at last physicians are going to come into

their own by being given the special privilege of investing in oil wells and leases owned and controlled by doctors, that give promise of making every one rich. Any doctor who has half brains will steer clear of all such propositions.

WELL, let's hope we really are on the downward path in the cost of everything. It sure has been some year of inflation in prices. Our November issue cost us over three times what our January, 1920, issue did. Financially the *Journal* has been a heavy loser, and unless a break comes soon we are due for an increased subscription price.—*Journal of the Michigan State Medical Society.*

The subscription price to the above named journal is now five dollars per year. Comments similar to the above are appearing in practically all periodicals, lay as well as medical, and publishing houses will give no assurance that there is to be any drop in prices soon.

THERE is no question but that the chiropractic delusion is spreading, and all because of the propaganda that has been persistent and thorough. The public is hearing but one side of the story, and it is time to get the other side from those who know how fallacious, illogical and impracticable is the chiropractic teaching and practice. It remains to be seen whether or not the members of the regular medical profession are going to go to the trouble and expense to do something toward educating the public, or are going to apathetically permit the chiropractors to secure anything they want because no opposition is offered.

WE view with misgivings the various socialistic movements which apply to the various phases of medical practice or public health work. The latest proposition is to place maternity under the influence of a socialistic scheme which has as its purpose the supplying of medical, hospital, and nursing care under state or federal control. It may seem to be a worthy object and yet it is a question whether or not the whole scheme is not one intended to aid various organizations which hope to profit at the expense of the taxpayers, and perhaps the scheme also is sponsored by various health insurance companies that certainly would profit by that kind of legislation.

SOME of the business houses of Fort Wayne are losing their janitors and ought to be peeved at the Ross Chiropractic College be-

cause good janitors are being turned into chiropractors in a few weeks' time, and not infrequently the chiropractic education and training, meagre as it is, is acquired while the janitor is still shoveling coal. The only question with the chiropractic college is whether or not the applicant has the money to pay for the college (?) course. The student, no matter how ignorant he may be, can obtain the diploma in a few weeks if he so wishes, and then the luckless and confiding sick are at the mercy of such incompetents.

SOME of the chiropractors are trying to make out that the two Fort Wayne chiropractors who were guilty of failure to recognize smallpox and in consequence prevent the spread of the contagion, are not in reality chiropractors. However, the culprits possess just as much general education and are just as well trained in the knowledge required to recognize any disease as hundreds of others who claim allegiance to the same sect. A chiropractor, no matter who or where he comes from, is not educated or trained to diagnose and treat diseases intelligently, and the Fort Wayne smallpox episode is only one of many similar circumstances that could be charged up to their ignorance and lack of training.

THIS notice will be read in the latter part of January by five or six hundred members of this Association who have not complied with the request to pay their dues for 1921 in advance. If you have procrastinated until this date, you still have a few more days until the first of February in which to remit to the county secretary and be in good standing. Your status changes February first if you have not paid, and as soon after that as the notices can be prepared, you will receive a letter from the State Secretary declaring you delinquent by reason of non-payment of dues. There need be no surprise at receiving this letter, as your local secretary has given you the chance before this to pay your dues.

THE Senate of New York University has announced the decision of the electors concerning selections for the Hall of Fame. The name of Dr. William T. G. Morton, a dentist, was acted upon favorably. Dr. Morton's fame rests upon his discovery of general anesthesia, for he was the first to demonstrate and proclaim the advantages of the use of sulphuric ether in producing anesthesia. Opinions may differ as to what constitutes fame and who is most entitled to the honor that is conferred by selection

to the Hall of Fame, though there can be not the slightest question of doubt concerning the fairness and good judgment used in the selections that have been made by a majority of the distinguished representative Americans who act as electors. While there were those who urged the selection of Ephraim McDowell, James Marion Sims, Benjamin Rush, or other medical men of less repute, yet unbiased judgment must give credit to the discoverer of general anesthesia as entitled to fame that surpasses almost anything that has been accomplished by a single member of the medical profession. The action of the electors should be approved generally.

EVERY member of the Indiana State Medical Association should keep in close touch with his representatives at the Indiana legislature now in session to the end that no legislator will be without comprehensive information concerning not only the advisability but the necessity of maintaining or even improving our present medical standards. Every one who desires to treat the sick in Indiana should comply with the same requirements. There should be no short cuts for anyone. We should permit the licensed practitioner of whatever school or creed to treat patients as he thinks best, whether he wants to dope them, rub them, cut them, or pray for them, but each and every one should comply with the same requirements. We are willing to bet ten dollars against a punched nickel that if each person licensed to practice medicine in Indiana is required to have such a general and special education as is required of the graduates of our own Indiana University School of Medicine, he not only will treat the sick rationally and intelligently but the public will be protected as it is not protected now with hordes of incompetents practicing without let or hindrance and clamoring for a legal recognition to which they are not entitled.

THERE has been a disposition in some quarters to cry out against "the slaughter of the tonsils". At present there is ample justification for the condemnation of "the slaughter of the thyroids". It really is shocking to note how frequently young girls at or slightly beyond the age of puberty are being subjected to thyroid operations without the slightest regard as to whether the nervous and psychic disturbances have any connection with the thyroid. In all probability the better trained surgeons, and especially those who have a conscience, and there are a few of such in existence, are not guilty of thyroid surgery without proving up the necessity for it, but there are many pseudo-

surgeons of mediocre ability and meager experience who are ever ready to sacrifice the thyroid either with or without provocation. While it may be true that now and then some perfectly inoffensive tonsils are removed, no harm is done, and by far the greater proportion of skilfully performed tonsillectomies result in distinct benefit to the patient. The same argument does not hold true in thyroid surgery, for while operations on the thyroid have been attended with decided relief to those in whom the operation is indicated, yet it probably is true, as asserted by some well known clinicians, that removal of the thyroid, especially in young girls, in many instances has resulted in great harm. It is to be hoped that a more careful study of these cases and the possible etiology of them may result in a more rational therapy.

At the South Bend session of the Indiana State Medical Association Dr. Charles H. McCully, of Logansport, in his presidential address, referred to Christian Science practice in rather uncomplimentary terms, and the Christian Scientists, believing that he is classing their practice as a fraud, have come forward with a letter concerning the matter which they desire published in *THE JOURNAL*. Inasmuch as we very frequently receive a letter from the Christian Scientists for publication in *THE JOURNAL* and are unable to aid this peculiar sect in furthering their propaganda, we do not feel called upon to publish this latest contribution unless Dr. McCully cares to answer it. While there may be some room for debate as to just how far one can go in coupling up the Christian Science faith and practice with the word fraud, yet we have no hesitation in saying that we not only think that much of the Christian Science practice can be classed as a fraud, but in the light of our present knowledge it should be considered criminal. No harm may come from Christian Science tomfoolery in connection with slight or imaginary ills, but when it comes to applying such tommyrot for the relief of diphtheria, purulent appendicitis, gallstones, syphilis, or any number of other diseased conditions that are either curable or greatly relieved by medical or surgical treatment, and are seldom if ever relieved by anything else, it is nothing short of idiocy to give Christian Science healing any other consideration than that given to the rank-est fake.

THE legislature is in session. The enemies of rational, scientific medicine are there in force to upset the existing medical standards. The chiropractors want a special licensing board which

will permit them to practice medicine without the formality of possessing general educational qualifications or knowing anything about the cause of disease. If our present medical standard is lowered it will be because the regular medical profession fails to educate the legislators concerning the true status of affairs. What every legislator should be told is that it is up to him to protect the public, and the facts concerning the chiropractic teaching should be placed before him in such a way that there will be no misunderstanding. Most legislators are amenable to reason, and if they do not understand how pernicious and damaging the claims of the chiropractors are, it is because it has not been pointed out to them. Any legislator with an ounce of brains can be made to understand the value of education and training for the recognition of the cause of disease and its intelligent treatment. He is not going to be led astray by the specious pleas of the chiropractors that a common school education plus a few weeks of attendance at a so-called chiropractic college is all that is required in order to enable one to diagnose and treat diseases skilfully. An analysis of the whole question is all that is required in order to put the average legislator right, and he must be shown that it is a question of protection to the public and not one of protection for the medical profession. It remains to be seen whether or not the legislators in the present Indiana legislature are presented the facts.

NEVER in the history of world has there been such a demand for charity of the substantial kind as there is at the present time, with millions starving in Europe, to say nothing of the limited amount of suffering and want that exists in our own country. Appeals for aid have been sent to the American people, and numerous benevolent and philanthropic organizations are soliciting donations from our generous people. The greatest difficulty encountered is in determining how and where funds may be contributed so that they will do the most good, as well as reach the people for whom they are intended. While it is not true in all instances yet in many it is known that for every dollar that is contributed a very large portion of the amount goes for salaries and is used up otherwise as a direct result of mis-management. When one can be satisfied that the bulk of the donation really will reach the people for whom it is intended he feels a little more like giving, but it does seem like a criminal waste to give some organizations thousands and hundreds of thousands of dollars when it is known that these same organizations are spending large sums of money in salaries for needless employees, many of whom are in-

efficient as well as extravagant. It would seem the part of wisdom to investigate the conduct of some of these charitable organizations before contributing to them, and it would be a wise provision if these various organizations were united under one head in order to avoid duplications and to effect a little economy in operation. Medical men are interested particularly in helping the destitute members of the medical profession in European countries, and we are happy to say that not one of the several soliciting committees is doing anything else than delivering to the stricken physicians of Europe every penny that is donated by the generous medical profession of the United States. We also are of the opinion that every dollar collected by the Literary Digest for the support of starving children of Europe goes in its entirety to the stricken sufferers. We wish we might say as much for some of the other charitable or benevolent organizations that have been collecting funds for European relief.

DEATHS

CHARLES E. DUNN, M. D., died December 16 at his home in Shelbyville, aged 60 years.

JOHN S. DUKATE, M. D., Alford, died November 11, aged 95 years. He was graduated from the University of Louisville in 1857.

J. DEWITTE GEORGE, M. D., Indianapolis, died December 1, aged 66, death being due to heart disease. He was graduated from the Homeopathic Hospital College, Cleveland, 1880.

C. C. MORRIS, M. D., died recently at his home in Rockville, aged 72 years. He was graduated from the Jefferson Medical College in Philadelphia in 1876. Death was due to heart disease.

HARRY H. SMITH, M. D., Middletown, Ohio, died recently, aged 48 years. He was graduated from the Indiana Medical College, Indianapolis, 1907, and was at one time physician at the Indiana Reformatory.

W. B. MORRIS, M. D., Chalmers, died at his home December 16, following an attack of uremic poisoning. He was 48 years of age and was graduated from the University of Louisville, Medical Department, in 1898.

GRANVILLE REYNARD, M. D., died at his home in Union City November 26 following a stroke of apoplexy. He was graduated from the Med-

ical College of Ohio, Cincinnati, in 1881 and was a member of the Randolph County Medical Society, the Indiana State Medical Association, and the American Medical Association.

GUSTAV G. BRUDI, M. D., New Haven, died December 6 at the Lutheran Hospital, Fort Wayne, aged 56 years. He had been a practicing physician in New Haven for the past thirty-five years. He was graduated from the Toledo Medical College, Toledo, in 1886 and was a member of the Allen County Medical Society, the Indiana State Medical Association, and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. ROYAL BANDELIER, formerly a resident of New Haven, has returned to that city and opened an office for the practice of medicine.

DR. J. C. COWAN, formerly of Dixon, Ohio, has removed to New Haven for the practice of medicine.

DR. M. F. PARRISH, Bluffton, has removed to Monroe for the continuation of his practice in medicine.

DR. D. M. REYNOLDS, Indianapolis, has become associated with Dr. F. A. King, of Garrett, in the practice of medicine and surgery.

DR. W. A. HOLLS has been named commander of the Hartford City post of the American Legion for the coming year.

DR. CHARLES B. COMPTON, formerly of Michigantown, has recently become associated with Dr. W. L. Hammersley, Frankfort.

WAYNE County is the recipient of an additional gift of \$50,000 to assist in the establishment of hospital features for the county's new tuberculosis sanatorium.

DR. JOHN STORK and wife, formerly of Stendal, have removed to Huntingburg, where Dr. Stork will conduct a drug store, having retired from the practice of medicine.

MEMBERS of the official boards of Methodist Episcopal churches in Terre Haute voted unanimously on November 30 in favor of the erection of a Methodist hospital in that city.

DR. ROBERT S. WOOD has purchased the office equipment of Dr. George W. Willeford, Washington, who is retiring from the practice of medicine and moving to Indianapolis.

DR. BEN F. PENCE, Columbia City, has been appointed government public health examiner for Whitley County to succeed Dr. D. S. Linvill.

DR. AND MRS. S. C. MURPHY, Warsaw, left December 16 for Rochester, Minn., where Dr. Murphy will undergo an examination at the Mayo Brothers' Sanitarium.

DR. CHARLES D. HUMES, Indianapolis, announces the removal of his offices from Suite 707 Hume-Mansur Building to Suite 408 Hume-Mansur Building.

THE report from the Lutheran Hospital, Fort Wayne, for the past six months, shows that the hospital earnings exceeded the expenditures, and that in that time 1,325 patients had been cared for and 916 operations performed.

At the meeting of the Clinton County Medical Society held December 2, Dr. A. G. Chittick was elected president, Dr. W. C. Mount, Kirklin, vice-president and Dr. L. L. Harding secretary-treasurer.

NEW officers for the Jay County Medical Society were elected December 9 as follows: President, Dr. H. W. Markley, of Redkey; vice-president, Dr. Ara Badders; treasurer, Dr. C. A. Paddock.

THE annual meeting of the Randolph County Medical Society was held December 13 and officers as follows were elected for 1921: President, Dr. R. W. Reid; vice-president, Dr. Wallace; secretary-treasurer, Dr. Robison.

At the recent session of the Board of Trustees held in Chicago, Dr. Rudolph Matas, New Orleans, was elected vice-president of the American Medical Association, succeeding Dr. Isadore Dyer, recently deceased.

ACCORDING to press dispatches from Vienna, dated November 26, deaths are exceeding births in Austria by 100 per cent and the mortality rate is without parallel in history. The deaths are due in the main to malnutrition.

FIFTY members of the Fort Wayne Medical Society attended the banquet at the Baltes Hotel December 14. The banquet is an annual get-together affair and no formal program was carried out.

THE Henry County Medical Society held its annual banquet and election of officers December 14. The officers for the new year are: Dr. L. C. Marshall, Mt. Summit, president; Dr. C. C. Bitler, vice-president (re-elected); and Dr. C. E. Canady, secretary-treasurer.

THE Knox County Medical Society held its regular meeting December 14 and elected the following officers for the coming year: Dr. John Scudder, Edwardsport, president; Dr. C. S. Bryan, vice-president; Dr. D. H. Richards, secretary-treasurer; Dr. H. W. Held, censor.

DR. JOHN AUER, pharmacologist of the Rockefeller Institute of New York, has been secured to institute and conduct a department of Pharmacology in the College of Medicine of St. Louis University, according to an announcement by the president of that institution.

JOHNS HOPKINS HOSPITAL, Baltimore, is to be reconstructed on the most approved plan at an estimated cost of between \$11,000,000 and \$12,000,000. A new pathological building will be erected at a cost of \$600,000 and many additions and improvements made.

DR. CLAYTON C. CAMPBELL, formerly of Indianapolis, has recently accepted a commission as major in the U. S. P. H. S. and is now located at U. S. P. H. S. Hospital No. 56, Ft. McHenry, Baltimore, Md., where he is chief clinician and chief of the medical section.

THE thirty-fifth annual meeting of the St. Joseph County Medical Society was held in Mishawaka on November 17. A fine, scientific program was enjoyed, Dr. Cline, of Chicago, being the principal speaker, and dinner was served at seven o'clock.

SEVERAL arrests have been made in Union City as a result of an order by the board of health that all the pupils in the schools be vaccinated for smallpox, inasmuch as some of the pupils were not vaccinated and returned to school without taking that precaution.

MORE cases of smallpox were present in the city of Goshen during the last week of November than have ever been known before in that city at one time. However, due to the efforts of the board of health and the co-operation of the people, the epidemic was soon brought under control.

At the annual meeting of the Bartholomew County Medical Society held December 16 the following officers were elected for the coming year: Dr. F. D. Norton, Columbus, president; Dr. C. M. Jackson, Elizabethtown, vice-president; Dr. Lyman Overshiner, secretary-treasurer.

THE regular meeting of the Fort Wayne Medical Society was held December 7 and officers were elected for the new year as follows: Dr. E. M. VanBuskirk, president; Dr. Charles R. Dancer, vice-president; Drs. Miles F. Porter, Jr., and E. E. Morgan were re-elected secretary and treasurer, respectively.

THE new officers for the Fountain-Warren Medical Society are as follows: Dr. A. M. Sullivan, Attica, president; Dr. C. B. McCord, Veedersburg, vice-president; Dr. J. W. Aldrick, Covington, secretary-treasurer; S. S. Delancy, Williamsport, censor; Dr. J. Roy Burlington, delegate to state convention.

THE Wells County Medical Society met December 8 and elected officers as follows: President, Dr. C. H. Mead; first vice-president, Dr. B. W. Harris; second vice-president, Dr. F. A. Metts; secretary-treasurer, Dr. H. D. Brickley; censor, Dr. J. L. McBride, Zanesville; Dr. A. W. Brown, delegate to the state convention.

At the annual meeting of the Indiana Society for Mental Hygiene, held in Indianapolis December 17, the following officers were re-elected: President, William Lowe Bryan, Bloomington; vice-president, T. F. Fitzgibbon, Muncie; treasurer, Evans Woollen, Indianapolis; secretary, Paul L. Kirby, Indianapolis.

A FINE of one hundred dollars and costs was recently imposed on the Wright Medicine Company, a corporation doing business at Peru, for shipping misbranded articles from the state of Indiana into the state of Missouri. The article was fraudulently represented as being a rheumatic remedy.

A FINE of one hundred dollars and costs was recently imposed on the Dermacilia Manufacturing Company, a corporation doing business at Hammond, for shipping a quantity of articles labeled "Dermacilia Eye Remedy" and "Dermacilia Ointment," which were misbranded.

At a meeting of the Wabash County Medical Society held in North Manchester at the Young Hotel December 16 the following officers for the coming year were elected: Dr. L. O. Sholty, president; Dr. N. A. Hale, vice-president; Dr. C. J. Cripe, North Manchester, secretary-treasurer.

DR. LUDVIG HEKTOEN, of Chicago, had conferred upon him the honorary degree of Doctor of Laws at the centennial celebration of the Medical College of the University of Cincinnati. The honorary degree of Doctor of Science was conferred upon Dr. Dean Lewis and Dr. Edward O. Jordan at the same time.

THE regular meeting of the Lake County Medical Society was held in Hammond on December 9, and the following officers were elected for 1921: H. J. White, Hammond, president; L. K. Ostrowski, Indiana Harbor, vice-president; E. E. Evans, Hammond, re-elected secretary-treasurer.

DR. WILLIAM MAC LAKE, former chief of the neuro-psychiatric division of the medical department of the air service at Mitchell Field, Long Island, has taken charge of the work of preparing the Marion National Sanatorium for the advent of shell-shocked veterans of the World War, to succeed Dr. Frank R. Hutchins.

It may be interesting to those who remember the "miracle healer" of New Carlisle, who enjoyed so much notoriety a short time ago, to know he is in jail in Chicago, due to the fact that Illinois laws are not as friendly toward "miracle" men as are the Indiana statutes.

DR. HAVEN EMERSON, former commissioner of health of New York City, has been appointed medical advisor and assistant director of the Bureau of War Risk Insurance. The appointment is in conformity with the policy of the Bureau of War Risk Insurance to select its headquarters' medical staff from the civilian medical profession.

THE regular meeting of the DeKalb County Medical Society was held in Auburn December 9. A fine scientific program was enjoyed and the annual election of officers held. The results of the election are as follows: President, A. V. Hines, Auburn; vice-president, W. W. Swartz, Auburn; secretary-treasurer, M. E. Klingler, Garrett.

THE annual election of officers of the Dearborn-Ohio County Medical Society was held December 1 in Aurora. The new officers are: Dr. Francis M. Mueller, Lawrenceburg, president; Dr. John W. Elfers, Rising Sun, vice-president; Dr. Edward J. Libbert, Aurora, secretary; Dr. Arthur T. Fagaly, Lawrenceburg, treasurer. The next annual meeting will be held in Lawrenceburg.

AT the annual meeting of the Ohio Valley Medical Association held in Evansville Dr. Charles T. Souther, Cincinnati, was elected president; Dr. L. W. Bremerman, Chicago, first vice-president; Dr. Sidney J. Eithel, Evansville, second vice-president; Dr. L. L. Solomon, Louisville, third vice-president; Dr. Benjamin L. W. Floyd, Evansville, secretary-treasurer.

THE first number of the new International Public Health Journal has just been issued by the Department of Medical Information, General Medical Department of the League of Red Cross Societies at Geneva, Switzerland. The journal will be devoted to all phases of public health work and preventive medicine, and will be published every two months in four languages French, English, Italian, and Spanish.

DR. CHARLES INFROIT died recently at his home in Paris as a result of the effects of x-ray burns received in 1898 when one of his hands became infected and an operation was performed. Dr. Infroit was a celebrated surgeon, and his announcement in 1915 in the Academy of Medicine of Paris that he had extracted a bullet from the heart of a soldier was read with interest throughout the world.

THE fifth annual meeting of the Indiana Society for Mental Hygiene was held at the Claypool Hotel, Indianapolis, December 17. The subjects for the morning, afternoon, and evening were "Mental Hygiene as a School Problem", "Mental Hygiene from the Medical Viewpoint", and "Mental Hygiene and the Court", respectively. Many interesting speakers from all parts of the state were present, and the program was a very interesting one.

A REPORT from the medical department of Johns Hopkins University states that beginning in September, 1921, at least two years of college work in chemistry will be required for entrance. This chemical work must be spent part in organic and part in inorganic chemistry. This is the minimum requirement and three full years of chemistry are advised, and in 1923 three full years will be required.

THE Huntington County Medical Society held its regular monthly meeting December 2, at which time the following officers were elected for the ensuing year: Dr. W. F. Smith, president; Dr. Lucien Smith, Warren, secretary-treasurer; Dr. R. G. Hoover, of Bippus, Dr. R. F. Frost, and Dr. M. C. Clokey, censors, and Dr. G. G. Wimmer, of Mt. Etna, delegate to the state convention, and Dr. C. H. Good, alternate to the state convention.

THE United States Civil Service Commission announces open competitive examination for the positions of roentgenologist, associate roentgenologist, assistant roentgenologist, and junior roentgenologist. The salaries are \$200 to \$250 a month, \$130 to \$180 a month, \$90 to \$130 a month, and \$70 to \$90 a month, respectively. Applicants should apply at once for Form 1312 to the Civil Service Commission, Washington, D. C., stating the title of the examination desired.

PHYSICIANS and surgeons of Spain are greatly perturbed over the recent invasion of their country by foreign practitioners, more especially Austrians, who have been unable to find sufficient means for subsistence in their own country, according to press dispatches from Madrid. In consequence they have appealed to the government to make regulations under which foreign practitioners would have to acquire a medical degree in Spain before being allowed to practice.

SINCE December 11 physicians in Missouri have been required to report all cases of diseases designated by the state board of health which are as follows: Anthrax, chickenpox, chancre, diphtheria, glanders, gonorrhea, influenza, leprosy, measles, meningitis (epidemic cerebrospinal), mumps, ophthalmia neonatorum, plague, poliomyelitis (acute anterior), rabies, scarlet fever, smallpox, sore throat (epidemic or septic), syphilis, tetanus, trachoma, tuberculosis, typhoid fever, typhus fever, whooping cough.

DR. ARVINE E. MOZINGO, Indianapolis, has recently returned from a five weeks' trip through the west, where he read a paper and showed two reels of motion pictures demonstrating his method for the treatment of empyema before the Western Surgical Association in Los Angeles, the county medical societies in Denver, Salt Lake City, Ogden, Reno, San Francisco, Long Beach, Phoenix, Tucson, Kansas City, the Illinois Section of the Clinical Congress of the American College of Surgeons at Peoria, and the St. Louis Medical Society.

THE annual meeting of the Daviess County Medical Society was held Thursday evening, December 2, at Washington, and took the form of a farewell to Dr. G. W. Willeford, dean of the Washington physicians, who is retiring after fifty-two years in the practice of medicine. Dr. Willeford is removing to Indianapolis. Also the election of officers was held, with new officers as follows: Dr. Will O. McKittrick, of Plainville, president; Dr. C. P. Scudder, Washington, vice-president; Dr. A. I. Donaldson, Washington, secretary-treasurer; Dr. O. E. Lett, Montgomery, censor.

THE Rockefeller Foundation announces a co-operative program to assist Medical Schools in Central Europe, which covers the following points: 1. Aid in the rehabilitation of scientific equipment for medical teaching and research. 2. Aid in furnishing medical journals to universities throughout Europe. 3. An invitation to the authorities of Belgrade University Medical School to study medical education in America and England as guests of the Foundation. Colonel F. F. Russell, who has been in Prague since August serving as technical adviser in public health laboratory organization to the Czech Ministry of Hygiene, will arrange the details of the Foundation's cooperation with the medical schools.

DURING December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies: Calco Chemical Co., Salicine;

Coleman Laboratories, Bacillus Bulgaricus; E. R. Squibb & Sons, Procaine, H. T. Procaine, Solution Tablets Procaine; Winthrop Chemical Co., Adalin Tablets 5 grains, Veronal Tablets 5 grains, Novaspirin Tablets 5 grains; Lederle Antitoxin Laboratories, Typhoid Glycerol-Vaccine, Typhoid Combined Glycerol-Vaccine, Pertussis Glycerol-Vaccine, Pneumococcus Glycerol-Vaccine; The Beebe Laboratories, Pneumococcus Vaccine No. 14, Typhoid-Paratyphoid Vaccine No. 39, Colon Vaccine (Acne) No. 11, Acne (Mixed) Vaccine No. 10; Nonproprietary Articles, Phenetsal, Saligenin.

CORRESPONDENCE

A CORRECTION

Indianapolis, Ind., December 28, 1920.
Editor THE JOURNAL:

I am writing to correct a mistake which I noted in the minutes of the Indianapolis Society as printed in THE JOURNAL of December 15th. The minutes of the meeting of October 26th have in them a resolution attributed to Dr. Wishard and at the time the minutes were sent to you, I thought that was correct. However, at the next meeting a correction to the minutes showed that this motion was by Dr. James H. Taylor.

I do not know what you can do in adjusting this matter, but I feel sure that if at all possible, the above mentioned motion ought to be accredited to Dr. Taylor instead of Dr. Wishard. It was simply an oversight on my part in not notifying you of this error earlier.

Trusting that this mistake may be remedied in some fashion, I am

Very sincerely yours,
LESLIE H. MAXWELL, Secretary.

REPORT ON AFTER-CARE OF INFANTILE PARALYSIS CASES

To the Editor:

The New York Committee on After-Care of Infantile Paralysis Cases published and distributed the report of "The Survey of Cripples in New York City."

Our aim has been to send this report to those in a position of responsibility in agencies for cripples and to all those who might have a general interest in cripples, and in plans for their aid. The undersigned would be glad to know of anyone who has been overlooked and would appreciate suggestions for further possible distribution of the report.

ROBERT STUART, Director N. Y. Committee on After-Care of Infantile Paralysis Cases, 69 Schermerhorn Street, Brooklyn, N. Y.

SOCIETY PROCEEDINGS

FLOYD COUNTY

The annual meeting of the Floyd County Medical Society was held December 10 at New Albany and the following officers elected for the ensuing year: President, William C. Winstandley; vice-president, John Hazelwood; secretary-treasurer, P. H. Schoen; censors, R. W. Harris, J. W. Baxter, and W. L. Starr, all of New Albany.

Regular meetings of this society are to be held the second Friday of each month instead of first Friday as heretofore.

P. H. SCHOEN, Secretary.

KNOX COUNTY

The two hundred and seventeenth regular and the forty-fifth annual meeting of the Knox County Medical Society was held in the Grand Hotel, Vincennes, December 14. Following the annual banquet, Dr. C. W. Hanford of Chicago, guest of the Society, gave an address on Radium Treatment.

Officers for the year were elected as follows: President, John A. Scudder, Edwardsport; vice-president, Chas. S. Bryan, Vincennes; secretary-treasurer (re-elected), D. H. Richards, Vincennes.

Guests from Sullivan, Washington, and Odon, Indiana, and Lawrenceburg, Illinois, were present at the banquet.

D. H. RICHARDS, Secretary.

JOHNSON COUNTY

The Johnson County Medical Society met at the office of Dr. D. R. Saunders, Franklin, and elected the following officers for the coming year: President, L. K. Phipps, Franklin; vice-president, J. N. Record, Franklin; secretary-treasurer, Luke P. V. Williams, Whiteland.

Plans were completed for holding the annual New Year's banquet at the Franklin Hotel, the wives and families of the members to be guests.

LUKE P. V. WILLIAMS, Secretary

CLINTON COUNTY

The Clinton County Medical Society met in regular session December 2 at Frankfort. The annual report shows eleven meetings held during the year with an average attendance of fourteen; twenty scientific papers presented; seven case reports.

The election of officers for 1921 was held at this meeting, with results as follows: President, A. G. Chittick, Frankfort; secretary, L. L. Harding, Frankfort.

(Signed) A. G. CHITTICK.

INDIANAPOLIS MEDICAL SOCIETY

November 9th

Meeting was called to order by Dr. R. E. Repass, second vice-president. The minutes of the previous meeting were read and approved as corrected. The applications of Drs. J. E. Holman, Robert E. Conway, George S. Reitter, W. D. Little, B. A. Thompson, Jacob Paskind and H. L. Magennis were read for the second time and referred to the Council.

PROGRAM:—Presentation of Cases.

Case—Ascites—Dr. John W. Sluss—Patient entered hospital three weeks ago with ascites, greatly enlarged liver, marked enlargement of superficial veins,

some edema of legs. Gave history of two attacks of severe abdominal pain for which morphine was given. Fluid removed three times. Urine normal, blood normal, Wassermann negative, ascitic fluid showed many lymphocytes and some red blood corpuscles. Blood pressure normal. X-Ray showed retention of food after six hours. Naturally think of tuberculosis. No tuberculosis was found anywhere else in the body and the temperature was normal. If tuberculosis it would be the ascitic form. Malignancy would also be considered. The roll of omentum might be of malignant origin, but the ascitic fluid findings do not warrant this diagnosis. Hydatid cyst also to be considered. An exploratory laparotomy will be made tomorrow to determine the cause. Dr. Ottinger mentioned the fact that he had seen this patient last July and at that time many of the glands were swollen. A piece of gland removed and sectioned was found to be carcinomatous.

Case—Speech Disturbances—Dr. C. F. Neu—Past history negative. Discharged from Army on account of bad teeth and underweight and toxic goitre. Nine teeth removed. Employer noticed loss of memory and also undue levity. Speech disturbance. Spinal fluid: Increased pressure—Cell count 90—Positive globulin—Wassermann four plus. Gold curve typical. Attempt to pronounce certain words and expressions showed the well known parietic speech.

Case No. 2—Past history negative—convulsion October 1st, 1920. Sick two weeks. Previously with chills—numbness in fingers. Two hours later rational, but a very severe headache remained. Latter still persists. Mumbling speech. Nystagmus before entrance to hospital. Difficulty in finding desired words. Spinal fluid and blood Wassermann negative. Two spinal punctures. Smears with carbolfuchsin staining negative. Widal negative. No stipple cells. White blood count increased. Probably either syphilis or a lead endarteritis.

Case Amebic Dysentery—Dr. F. B. Wynn—History of frequent bowel movements with severe pain just previous to same. Incontinence on entrance. Stools had bad odor, light in color. Patient had had various treatments, but salvarsan only drug which gave relief, and this for three months. Blood Wassermann negative and stools showed undigested food particles, red blood cells and much mucus, negative for tuberculosis. In second examination the ameba histolytica was found in abundance. White cells 14,000. Reds normal. Treatment consisted of emetine hypodermically grams 1 daily for ten doses. Quinine colon irrigations 1—1000 and one intravenous injection of 0.6 neosalvarsan. At present patient much improved. One or two stools daily. This condition is rare in this vicinity, but more frequent than we think. Have seen at least twelve cases in this city. It is a tropical disease. Following Spanish-American War there were a number of cases. We are derelict in the examination of stools, probably on account of our fastidiousness. Sometimes one treatment and sometimes another helps the condition. The difference between bacillary and amebic dysentery is that the former is epidemic and more severe whereas the latter infections usually take place through carriers contaminating food or the dishes. This infection is not as frequently water borne as was formerly believed.

Case—Idiopathic Peritonitis—Dr. Wm. E. Gabe—Family and past personal history negative. At age of eleven had tonsils and adenoids removed. Present illness began with very severe pain in left side of abdomen. Pain radiated over abdomen. Taken to hospital and immediately operated. Free pus was found in abdomen—appendix was normal. Intestines

somewhat injected. Pelvis normal. Gall bladder easily emptied. No focus could be found. Drain inserted and abdomen closed with uneventful recovery. There was no apparent cause for this infection. An erysipelas or tonsillitis is usually basic in such conditions. Infection generally hematogenous.

Meeting adjourned; attendance 157.

L. H. MAXWELL, Secretary-Treasurer.

November 16th.

The meeting was called to order by the president, Dr. Jas. H. Taylor. The minutes of the previous meeting were read and approved.

The applications of Drs. M. F. Steele and John A. White were read for the second time. Drs. Clifford E. Cox, H. L. Magennis, B. A. Thompson, W. D. Little, Robt. E. Conway, and John W. Hofmann were elected to membership in the Society.

PROGRAM:—Paper—"Chronic Leucorrhea": Dr. CARL HABICH.

Abstract—The conclusions are as follows:

(1) The most frequent cause of chronic leucorrhea is chronic infection of the cervical mucosa and of the cervical glands.

(2) Cure of chronic endocervicitis should be attempted more frequently not only to remove a focus of infection but also a predisposing factor in the cause of cancer.

(3) The cure of true chronic endocervicitis is surgical.

(4) Simple trachelorrhaphy is contra-indicated in chronic endocervicitis and should only be done in those cases in which the infection is limited, generally early in the puerperium.

(5) Plastic amputation of the cervix should not be done in those cases in which future pregnancies are anticipated.

(6) There are certain objections to all of the operations which have been devised for the cure of endocervicitis, the Schroeder method probably insuring the best results.

(7) We must seek further for the ideal surgical procedure which will insure the complete removal of the entire infected areas, the preservation of the cervical musculature and which will not interfere with future pregnancies.

Paper—"Hypophyseal Insufficiency": Dr. E. N. KIME.

Abstract—The scope of the present subject for this paper does not pretend to cover the literature exhaustively, but one phase of pituitary dyscrasia is covered—that of underactivity or hypophyseal insufficiency. Anatomy and embryology—both lobes. Pars anterior from stomatodeum. Lobus posticus consists of two parts—the pars nervosa or post lobe proper, and pars intermedius (located between the other two lobes); post lobe developed from the central nervous system, pars hypothalamicus of the cerebrum. Important relations—sella turcica, optic nerves, cavernous sinus, sphenoidal sinus and nose, overlying brain, tuber cinereum, optic tracts, mammillary bodies, third ventricle.

Physiology—as worked out by Cushing and others—Anterior Lobe—concerned with growth—particularly of the genital, dermal and musculo-osseous structures. Posterior Lobe—metabolism, especially carbohydrate metabolism, sugar tolerance. Blood pressure. Urinary secretion (Pars Intermedia). Complete removal of the gland is fatal.

Pathology—Very little known at present—especially in the non-neoplastic varieties. Similar in appearance to parathyroid gland.

Normal Histology—3 Lobes—Anterior consists of blood vessels and epithelial cells. Epithelial cells two varieties, basophile or chief cells, and eosino-

philic or chromophilic cells. So far no histologic entity of the nature of the thyroidal mitochondria of Goetsch has been identified. Middle lobe probably part of both anterior and posterior lobes. Epithelial cells, neuroglia cells and fibers. Non-neoplastic histopathology, nothing complete or definite. Neoplastic histopathology.

Because of duality of origin any tumor of glandular or nervous tissue origin is possible. Also connective tissue tumors from the supporting stroma of the anterior lobe of gland. Specific etiologic data along the line of bacteriology or serology is also lacking so far as hypophyseal affections are concerned. Clinical picture has in the past been based upon meager pathological data upon conflicting physiological findings. However, due to the comparative wealth of clinical data, studies, largely empirical, based upon Hippocratic methods have been made. Careful observation and record of clinical signs and symptoms as present before and as modified by specific treatment. Symptoms and signs of hypophyseal insufficiency: (1) Local pressure signs, mainly in neoplasms, (2) Hormonic signs. (A) General, (B) Regional, (3) Polyuria, changes in basal metabolism, carbohydrate tolerance, mentality, etc.

Special examination (1) Urine, (2) Blood pressure, (3) Basal Metabolism, (4) Blood Chemistry, (5) X-Ray, (6) Ophthalmoscopic, (7) Goetsch reaction and cutaneous pituitary.

Treatment—(1) Substitution of whatever substance is lacking, (2) Thyroid, (3) X-Ray or Radium, (4) Surgery in some cases. Twenty cases of hypophyseal insufficiency, 15 primary, 2 secondary to adrenal, 1 gonadal and 1 thyroidal were mentioned.

Discussion—Dr. E. E. Padgett—The subject treated in Dr. Habich's paper is receiving more attention now than ever before. Focal infections may be the source of this trouble sometimes. Surgery not always necessary—personally swabs cervical canal with iodine and fills vagina with fullers' earth. Cervical glands may remain relatively quiet for years except for a discharge. Prophylaxis very important. Lacerated cervixes resulting from childbirth apparently heal, but many cases later show remains of lacerations. Surgery of cervix in removal of all glands difficult. However with curette and cautery I feel safe.

DR. E. F. KISER—Dr. Habich gave a masterful presentation of a condition generally considered trivial. One often sees mental aberration in connection with chronic leucorrhea. We know very little of endocrinology and even those men specializing on this subject do not have a great amount of definite information. The most striking fact in Dr. Kime's paper is that almost all the twenty cases he reported were discovered in the regular routine of office practice and presented themselves on account of constipation or some other abdominal complaint of simple origin. I cannot agree with the Doctor that all of the cases reported were strictly hypopituitary ones. The close relationship of all glands of internal secretion makes it impossible to select any one gland as alone responsible. Endocrine dystrophies have an enormous future in medicine.

DR. S. E. EARP—Many women with leucorrhea come to the general practitioner. Generally they have seen many other physicians for this condition. Dr. Reeder of St. Louis says all cases are founded upon a physiological basis—many cases are curetted, but none get well without further treatment. How shall we differentiate between a pathological and physiological leucorrhea? It is not wise to take douches constantly, but many after douching with silvol,

argyrol or iodine followed by an astringent such as the glyceride of tannic acid get well. I should like to know of some good medical treatment for this condition.

DR. F. E. ABBETT—Has treated leucorrhea in almost every possible fashion. Sometimes one thing, sometimes another, helps. Lately has been using a capsule of silvol allowing same to dissolve in cervix. Astringent douches are temporary reliefs—general treatment also may help in getting results. It is very difficult to handle chronic cases without surgery.

DR. WM. H. FOREMAN—There were certain symptoms which made us think we were correct in our diagnosis of these cases. Patients do not come to physicians for endocrine disturbances. It is generally for gastro-intestinal symptoms and these mostly functional. In cases with involvement of the somatic system there is a hypocondition of all glands and patient complains of neuritis, neuralgia, rheumatism, irritability, etc. In the sympathetic system involvement we have the vagatonic type—pains, definite and indefinite in abdomen. This condition is most common in women. We find spastic constipation, hyperchlorhydria, flatulence, hyper motility. Sympathetic system is first attacked by the endocrine chain and therefore we have abdominal pain. Errors of perception, judgment and reasoning power are frequent. The word nervousness ought not to be in our vocabulary.

DR. A. S. JAEGER—Leucorrhea is a symptom, but chronic leucorrhea as a symptom of endocervicitis would be a more correct title for Dr. Habich's paper. I believe endocervicitis is secondary to leucorrhea. The curette does no good except for removal of foreign substances. Chronic leucorrhea often found in connection with general conditions. Often after a hysterectomy the patient returns with a vaginal discharge and cervix has been removed. Many with discharge may be cured by stopping lysol douches.

DR. L. D. CARTER—Has seen a number of pituitary cases. Treatment is unsatisfactory. Milder cases are amenable to treatment. If one gland is underactive all the endocrine glands are. Has used all the glands singly and is now using the plnriglandular formulae, selecting the one which seems most deficient and using the others in a synergistic manner. Most hypopituitary cases are of the preadolescent type with small skeleton. This sometimes, is corrected at puberty.

DR. T. C. KENNEDY—Danger from use of radium in these cases is more from stenosis of cervix than sterility. Many cases show an amenorrhea for three or four months, but then return to normal menses. Pregnancy in two cases following radium treatment noted. Radium is not by any means a specific in these cases.

DR. HABICH (in closing)—Cervical infections are the main cause of leucorrhea. Medical treatment is an aid. Chrettement should be below the internal os for a pure endocervicitis. None of the operations are satisfactory.

DR. KIME (in closing)—The hypopituitary condition was primary in perhaps half of the cases reported. Hypopituitarism is a factor in the conditions mentioned in the paper.

Meeting adjourned; attendance 75.

L. H. MAXWELL, Secretary.

LAKE COUNTY

A regular meeting of the Lake County Medical Society was held at the Lyndora Hotel in Hammond on December 9, 1920, thirty members being present. After an excellent dinner, Dr. L. J. Ostrowski gave an interesting talk of his experience with the Red

Cross in Poland. President McMichael delivered a forcible address on Medical Organization particularly as it relates to the Lake County Medical Society. Every member present made a speech, the tenor of all being for the betterment of the Lake County Society.

Applications for membership were received from Roscoe H. Reeve of Whiting, Robert N. Bills of Gary, J. H. Goad of Gary, and Frank R. Doll of Whiting. All of these names were indorsed by the Board of Censors and duly elected to membership.

A letter from Dr. King of the State Board of Health asking the Secretary to recommend to the United States Public Health Service the names of members of the County Society to whom cases of venereal disease might be referred by the Board was read. The Secretary was instructed by unanimous vote to write Dr. King that the Society disapproved of this plan.

On motion, the Chair appointed a Committee consisting of Drs. Nesbit, Oberlin, and L. J. Ostrowski to draw up snitable resolutions on the death of Dr. Hoskins of Whiting.

The Secretary-Treasurer's report showing receipts for the year 1920, of \$84.00, expenditures of \$38.50 with a balance in the treasury of \$80.42 and an average attendance during the year 1920 of 17 was accepted.

The following officers were unanimously elected: Dr. H. J. White of Hammond, President; Dr. L. J. Ostrowski Indiana Harbor, Vice-President; Dr. E. E. Evans of Gary, Secretary and Treasurer. Dr. E. E. Evans and Dr. T. W. Oberlin, delegates to the State Association. Drs. Malmstone and Nichols, alternates. Dr. Ira Miltimore was elected as a member of the Board of Censors for three years, succeeding Dr. Gibbs, whose term expired. Dr. F. H. Fox elected for one year, to succeed Dr. Hoskins, deceased. (Dr. Iddings still has two years to serve.)

It was voted that the first six meetings in 1921 be held in Gary and the last six in Hammond provided that the Society might accept an invitation to meet at any other place at any time, should it seem advisable.

Meeting adjourned.

E. E. EVANS, Secretary.

GRANT COUNTY

The Grant County Medical Society met in regular session November 30, 1920, with the following interesting program:

Dr. E. O. Daniels—"Meningitis."

Dr. J. F. Loomis—"The Irregular Practitioner and His Effect on the Future of Medicine."

At the close of the business meeting the following resolutions were read and adopted:

"WHEREAS: Dr. Harry Miller has been recently transferred from the local branch of the National Military Home to the position of Chief Surgeon of the Danville Branch at Danville, Ill., and

"WHEREAS: This marks the termination of 30 years as executive officer in this branch and the rendition of a service of unsurpassed consideration, kindness, efficiency and faithfulness to his trust, and

"WHEREAS: During these years it has been to us a constant incentive to have associated with his nobility of character and earnestness of purpose as a fellow citizen, friend, gentleman and physician;

"BE IT RESOLVED: That the Grant County Medical Association express to Dr. Miller, in this manner, its regret at his departure and its keen loss of his association, and wish for him God-speed and happiness in his new post and,

"BE IT FURTHER RESOLVED: That this resolution be made a part of the permanent records of this society and that a copy of same be sent to Dr. Harry Miller and a copy to the Board of Managers of the National Military Home, through its President, as an expression of our esteem.

"NETTIE B. POWELL, Secretary.

THE MUNCIE ACADEMY AND DELAWARE-BLACKFORD MEDICAL SOCIETY

OCTOBER 22, 1920.

Meeting of the Muncie Academy was called to order by Dr. Buckles, the president. Minutes of previous meeting read.

Dr. Mix presented a case of cellulitis in a boy ten years of age.

Election of officers for the ensuing year as follows: President, Dr. B. R. Kirklin; Vice-President, Dr. H. Bowles; Secretary and Treasurer, Dr. R. H. Beeson. Program: Paper, "Post Partum Hemorrhage (Cervical)—Dr. H. D. Fair.

Paper was discussed by several members.

It was moved and seconded that on account of the district meeting the following Friday the regular Academy meeting be postponed until November 12th.

Adjourned.

NOVEMBER 12, 1920.

Meeting of the Muncie Academy of Medicine was called to order by Dr. B. R. Kirklin, president. Minutes of previous meeting read. Dr. O. E. Spurgeon gave further report on a case, supposedly chorea, which he had previously presented before the Academy. A case involving medical ethics was brought up by Dr. H. D. Fair. Two cases of pellagra reported by Dr. F. E. Hill. Dr. J. C. Quick gave health report showing much diphtheria and scarlet fever in the city and county with some deaths from each.

Two applications for membership were presented, the applicants being Drs. L. E. Weary and R. E. DeWees, both of Hartford City.

PROGRAM:—Paper: "*Pernicious Anemia*":

DR. F. L. GLASCOCK.

Pernicious Anemia: "The subject of this paper, idiopathic or pernicious anemia, presented itself to the writer because of the fact that the incidence of the disease in this particular vicinity seems to be on the increase. After the foregoing statement one might doubt the tact of quoting Cabot "that the incidence of the disease is a good deal a matter of keenness on the part of the practitioners of any district", but I think I may safely do so when I add that many of the cases I have heard of I have never seen and the few that I have under personal observation are very probably but a small percentage of the many that have gone undiagnosed.

Two cases that have been diagnosed pernicious anemia present such striking symptoms, so like those pictured in the literature, that a review of them might perhaps be both interesting and instructive:

Case One:—The patient is a male (in which sex the disease is most common), aged 55 years; has the appearance of being extremely well nourished, weighing some 195 pounds. Presented himself at office some eight months ago and at that time the lemon yellow tint to his skin was the most striking feature. He was having his bad days, but was going daily about his business and his strength seemed little diminished. A few gastro-intestinal symptoms were also showing themselves, some belching and bloating, "a little indigestion" he termed it. Yet at that time the laboratory findings as reported by the Mayo clinic

were as follows: Blood—hemaglobin varying from 52 to 59 per cent, red blood cells 2,780,000, leucocytes 5,600, moderate anisocytosis, cells not uniform in size, and slight poikilocytosis, cells irregular in shape. There was absence of hydrochloric acid in the stomach, the Wassermann test was negative. Blood pressure 115-85. A line of treatment was advised and a final injunction added "that if the blood was at any time reduced to an alarming condition transfusion should be resorted to."

Under arsenic by mouth in the shape of Fowler's solution the condition was for several months apparently held fairly stationary. Then to the gastro-intestinal symptoms was added an occasional diarrhoea, whether from the arsenic or from the disease itself is not known. At such times, however, the Fowler's solution was stopped. Then the bloating became more marked, there was occasional vertigo, and a constant tingling, numbness and coldness of the hands and feet. Later came transitory spells of faintness and palpitation none lasting more than several hours. Yet six months from the time of the first blood examination the hemaglobin was 57 per cent, red cells 2,800,000, showing practically no change although the symptoms were much aggravated.

One month later there came on very suddenly a severe attack of faintness and palpitation, breathing was difficult, the attack lasting some 5 to 6 hours. It seemed that the time for a transfusion had come and it was given, 650 c. c. of blood being transfused. A week to 10 days following the procedure no marked improvement was noticeable. If anything the blood picture was slightly lower and the blood pressure fell some 10 to 15 degrees.

A second case, a woman of 47 years, is interesting because of the fact that a sore tongue and mouth was her principal complaint one year before any anemia was suspected. Periodically small ulcerated areas appeared on the mucosa of the mouth. Gastro-intestinal symptoms were marked, belching, bloating, a persistent form of vomiting and after the use of small amounts of arsenic in Fowler's solution an intractable diarrhoea. She had attacks of weakness and palpitation. At times there was an elevation of temperature not exceeding 101 degrees. An anemic condition of the conjunctiva and finger tips was noted and a blood count was taken. The hemaglobin was 45 per cent, the red cells 2,000,000. Under arsenical treatment rapid improvement in all of her symptoms was noted and the process seems to have been checked temporarily.

The term applied to the disease, idiopathic, betrays our lack of knowledge of the etiological factor producing it. We do know, however, that by it both hemaglobin and red blood corpuscles are reduced, the red cells to a much greater extent than the hemaglobin. The latter remains relatively high, which is not true of other forms of anemias, such as that produced by chlorosis, gastric carcinoma and the various forms of secondary anemia. It is said that in no other form of anemia are the red cells reduced to such an extent, frequently to 20 per cent of the normal. Some destructive agent is very evidently at work, perhaps both hemolizing the red blood cells and attacking the blood-making organs. Most authorities attribute the damage done to some toxin produced within the body. Oral and gastro-intestinal sepsis has its advocates. The increased incidence of the disease in women who have undergone repeated pregnancies would point in such cases to a toxin elaborated in pregnancy. Fright and extreme emotion are said to predispose. Heredity also plays a part, several members of one family being often similarly affected.

Owing to the fact that the gastro-intestinal tract is so persistently and markedly affected by the disease it would seem logical to pay particular attention to it, particularly the mouth, where a causative micro-organism might be harbored. Pyorrhea should be treated, carious teeth extracted, and diseased tonsils removed. Intestinal antiseptics are suggested, but in my opinion little might be expected from them. Occasional purging and daily high rectal enemata are said to have been used with beneficial results.

In the majority there is a gastric achylia. Neither hydrochloric nor ferment glands secrete, there being an atrophy of the gastric mucosa. Hydrochloric acid and pepsin are useful in such cases.

The drug "that cures the curable cases and benefits the others" is arsenic. It may be used in many forms, Fowler's solution by mouth being the most simple. In my experience, which is extremely limited, the administration in this disease of Fowler's solution cannot be long continued even in moderate dosage without symptoms that interdict its further use. The cacodyllate of sodium hyperdermatically or salvarsan in the vein is reported to act in some instances very beneficially without any attendant gastric or intestinal symptoms.

Blood transfusion is generally, I believe, resorted to after medical treatment has failed to produce the desired results. As a rule it is followed by a better blood picture and an amelioration of symptoms, however transitory that may be. Splenectomy is still a later resort. Personally I have seen one such case. By it a cure was not effected, the course of the disease appeared to progress in much the same manner as an unoperated case.

One symptom of pernicious anemia which has been said to be of great value in differential diagnosis is that of retinal hemorrhage. In no other anemia is it found. For that reason an examination of the eye grounds is of prime importance in the making of a diagnosis."

Discussants: Drs. Sellers, Beeson, Trent and Spurgeon.

Committee consisting of Drs. Moore, Ball, Hollis, Beeson and Kirklin were appointed to arrange program for the various meetings.

Adjournment.

NOVEMBER 19, 1920.

Muncie Academy of Medicine met at the New Kirby Hotel. Meeting called to order by Dr. Kirklin, President. Minutes of last meeting read and approved.

Committee on Program submitted the following report: "The Committee on Program wishes to make the following report and move its adoption: That all case reports be abstracted by the doctor reporting the case and given to the secretary for publication in the State Journal. That only one case be reported at a meeting. That when local reports are not possible a brief review of current medical literature or a report from Cabot be substituted. That all discussion of the case report be confined to the case in question.

That the paper of the evening be freely discussed on its scientific merits. That each discussant be limited to five minutes by the chair. That the chair not allow individual discussion between members without formal recognition."

Report was discussed and was adopted with the following amendment: "That the discussant be not limited in time so long as he sticks to the subject."

Drs. L. E. Weary and R. E. DeWees were voted into the Academy.

PROGRAM:—Paper—"The Thymus":

DR. GORDON.

The Thymus: "A brief review of the anatomy of the thymus as described in Cunningham's Anatomy.

The thymus, a two-lobed structure, lies in the anterior part of the superior mediastinum extending upwards for a variable distance into the neck and downwards as far as the fourth costal cartilages. It lies behind the sternum, between the lungs and in front of and closely applied to the great vessels, namely, the pulmonary artery, the innominate and superior Vena Cava veins. Normally it is said to reach its maximum development by the end of the second year after which it remains stationary or degenerates, very little of the glandular structure being left after the age of puberty.

The morbid conditions involving the thymus gland are: (1) status lymphaticus, and (2) enlarged thymus. Enlarged thymus is the most common and important condition connected with the gland. It usually occurs soon after birth, but may occur later in life. Very little is known as to the cause of an enlargement of the thymus.

The symptoms according to the observations of Howard Brayton and Arthur Heublein may be divided into two classes: General and local.

Fussell in Monographic Medicine says, "The symptoms are difficult inspiration and expiration often amounting to an actual stridor. The inspiratory and expiratory acts are both prolonged, the former being more marked. There are signs of obstruction in breathing. There is dullness of greater or less extent under the upper piece of the sternum, often extending beyond the line of the upper piece of the sternum. Cyanosis and edema of the lungs occur and intra cranial pressure is manifest. There may be a mere stridor, there may be attacks of acute symptoms due to compression, or there may be sudden death, the severity of symptoms depending on the degree of compression."

Of the symptom cough Brayton says, "The cough is often croupy and paroxysmal, worse during feeding, and out of proportion to the clinical findings in the throat or chest. During the attacks of cough there are often a few moist rales at the base of the lungs.

The one diagnostic means which stands above all others and the only one which is infallible is the X-Ray.

Before making a clinical diagnosis of thymic enlargement, one must think of and rule out various conditions giving rise to dyspnoea in children such as infections involving the larynx, laryngismus stridulus, compression of the trachea by peribronchial glands or new growths, adenoids, congenital malformation of the larynx, foreign body in the air passages, etc.

Case Report:—Male infant seen by myself and referred to Dr. B. R. Kirklin for treatment.

The child, weight ten pounds, about six hours after birth developed a respiration which was decidedly abnormal. The patient became moderately cyanotic and the inspiratory stridor could easily be heard in the adjoining room. The infant had no fever; the rate of its respirations was about seventy a minute; while the pulse rate had dropped to eighty per minute. I was unable to detect any rales in the lungs and if any were present they were obscured by the loud inspiratory and expiratory stridor. There was dullness both to the right and left of the manubrium extending slightly beyond the mammary line on either side as high up as the clavicles and down-

wards merging into the area of cardiac dullness. The thyroid was quite palpable, being moderately enlarged. Digital examination of the larynx and an effort to remove any mucus by that means or by the use of suction with a syringe and catheter yielded no results and afforded no relief from symptoms. The child coughed and sneezed frequently and would nurse for a very short time. The mother said its symptoms were worse when it tried to nurse. The following day its condition seemed a little improved and as this patient had had an infant brother to die of the same condition four years previously at the age of three weeks it was decided to risk a trip to Muncie for X-Ray diagnosis and possible treatment.

The X-Ray revealed a large thymus corresponding to the area of dullness. The patient was given a treatment immediately and returned home. A few hours after treatment the pulse rate rose to 120, the stridor was almost inaudible; the child began to nurse well, but there was a slight fever, amounting to 99.5 or 100, which disappeared within 36 hours. Subsequent exposure to the X-Ray ten days later produced the same rise in temperature following its use which disappeared in about the same length of time. At the present the child is doing very well.

This was a severe case, presenting typical symptoms and very easily diagnosed. However, had it been milder it might easily have been overlooked.

I believe that in the case of every infant who has attacks habitually of dyspnoea, cough and cyanosis one should search with the X-Ray for a possible cause in the thymus when other causes are not certain.

DISCUSSION.

CHAS. A. SELLARS—The essayist has covered the subject of hyperplasia of the thymus in infancy and there is not much that I will be able to add. As there is probably a normal hyperplasia in most all new born babies, it behooves us as physicians to be on our guard and to know that involution is occurring normally. This can only be done by the aid of the X-Ray. A point brought out by the essayist that is new to me and which should be looked for in these cases is the progressive slowing of the pulse.

In these infants with persistent thymus we should consider them from two angles: One in which there is the hyperplasia alone and producing its pressure symptoms upon the vital structures within the mediastinum and the other in which we have heretofore called status lymphaticus. This term is usually used to convey the conception of a peculiar condition of lowered constitutional resistance predisposing to sudden death, either spontaneously or as the result of relatively slight cause. A hyperplasia of the thymus is persistent in both of these conditions. However, in status lymphaticus we have the added anatomic stigmata, that of hyperplasia of the lymphatic organs, particularly of the tonsillar ring and lymphoid tissue of the intestines, hypoplasia of the arterial system, rachitis. Patients showing this symptom complex are regarded as especially susceptible to physical and mental shocks, infections and intoxications.

That they are susceptible to treatment in a great majority of cases has been proven first by Friedlander of Cincinnati and Myers of Milwaukee, who both treated a case with X-Ray. Both cases were cured by X-Ray exposures energized by a static machine. I would consider the X-Ray treatment of these cases the most rational and least dangerous. If the gland should be made to atrophy too fast I would see no danger as Park and McClure of Johns Hopkins University have proven by animal experi-

ments no detectable alteration physical or mental. I have had six cases of hyperplasia of the thymus in my limited practice. Four are dead and two are living. My first case was diagnosed by autopsy. It was seven years of age and showed a status lymphaticus. The second was a status lymphaticus and was diagnosed clinically and treated with X-Ray exposures energized with a static machine with no results. The third was diagnosed as laryngeal diphtheria and autopsy revealed a very large thymus. The fourth was diagnosed clinically post mortem. The fifth is a case of status lymphaticus eight years of age and is receiving X-Ray exposures. The sixth is a case of hyperplasia of the thymus in a baby seventy-two hours old and is receiving X-Ray treatment. Both of the later cases have received the confirmatory diagnosis with the Roentgen ray."

Adjournment.

NOVEMBER 26, 1920.

Muncie Academy of Medicine met at New Kirby Hotel for weekly dinner meeting.

Case of pellagra presented by Dr. Hill. Discussed by Drs. Moore and Sperry.

PROGRAM:—Paper: "*Cholecystectomy and Operative Injury to the Bile Ducts.*":

Dr. H. K. BONN, Indianapolis.

Abstract: Dr. Bonn described and illustrated by lantern slides the various anomalies of the bile ducts and blood vessels. The modes of injury, during or incident to the removal of the gall-bladder, to the hepatic and common ducts were described and the precautions necessary of observance in order to avoid these injuries were described with considerable detail. The control of hemorrhage, during operations on the biliary tract, was discussed, and the repair, by various methods, of injuries to the hepatic or common ducts was discussed.

Discussant—DR. WILL C. MOORE.

Adjournment.

THE TRUTH ABOUT MEDICINES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

NEW AND NONOFFICIAL REMEDIES

MERCURY (MERCURIC) BENZOATE-SEYDEL.—A brand of mercuric benzoate (see New and Nonofficial Remedies, 1920, p. 181) complying with the N. N. R. standards. Seydel Manufacturing Co., Jersey City, N. J. (*Jour. A. M. A.*, Dec. 4, 1920, p. 1569).

CULTURE OF BACILLUS BULGARICUS-COLEMAN.—A pure culture of *Bacillus Bulgaricus*, marketed in bottles containing about 90 cc. This culture is stated to be suitable for all purposes for which *Bacillus bulgaricus* is used (see general article on Lactic Acid Producing Organisms and Preparations, New and Nonofficial Remedies, 1920, p. 156). Coleman Laboratories, Wheeling, W. Va. (*Jour. A. M. A.*, Dec. 18, 1920, p. 1717).

PNEUMOCOCCUS GLYCEROL VACCINE (Types I, II, III Polyvalent)-LEDERLE.—A suspension of killed pneumococci of characteristic strains of Types I, II and III (equal proportions) in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. Supplied

in packages of three vials containing the glycerol vaccine and of three vials of sterile diluent with which to make the proper dilution of the vaccine at the time of injection. For a discussion of the actions and uses of pneumococcus vaccine, see *New and Non-official Remedies*, 1920, p. 286. Lederle Antitoxin Laboratories, New York.

PERTUSSIS GLYCEROL VACCINE-LEDERLE.—A suspension of killed pertussis bacteria (Bordet) of eight strains, in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. The product is supplied in packages of five vials containing the glycerol vaccine, and five vials of sterile diluent with which to make the proper dilution of the vaccine at the time of injection. For a discussion of the actions and uses of pertussis bacillus vaccine, see *New and Nonofficial Remedies* 1920, p. 235. Lederle Antitoxin Laboratories, New York.

TYPHOID GLYCEROL VACCINE (Prophylactic)-LEDERLE.—A suspension of killed typhoid bacteria (Rawling's strain) in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. The product is supplied in packages of three vials containing the vaccine, and three vials of diluent with which to make the proper dilution of the vaccine at the time of injection. For a discussion of the actions and uses of typhoid vaccines, see *New and Nonofficial Remedies* 1920, p. 291. Lederle Antitoxin Laboratories, New York.

TYPHOID COMBINED GLYCEROL VACCINE (Prophylactic)-LEDERLE.—A suspension of killed typhoid bacteria (Rawling's strain), 50 per cent.; killed paratyphoid bacteria, Type A, 25 per cent. and killed paratyphoid bacteria, Type B, 25 per cent. in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. The product is supplied in packages of three vials containing the vaccine, and three vials of sterile diluent with which to make the proper dilution at the time of injection. For a discussion of the actions and uses of typhoid vaccines, see *New and Nonofficial Remedies* 1920, p. 291. Lederle Antitoxin Laboratories, New York (*Jour. A. M. A.*, Dec. 25, 1920, p. 1783).

PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Linonine (Kerr Chemical Co.), held misbranded on the ground that the curative claims were held false and fraudulent. Valentine's Sarsaparilla Compound with Potassium Iodide (Allan Pfeiffer Chemical Co.), sold under therapeutic claims which were false and fraudulent. Olive Branch (Olive Branch Remedy Co.), misbranded in that the curative claims were false and fraudulent. Prince's Pills, Liniment and Tru-Vigor Nerve Tablets (Boston Drug and Chemical Co.), misbranded in that the therapeutic claims made for them were held false and fraudulent. Mrs. Summers' Absorbent Pile Remedy, Mrs. Summers' Womb, Ovarian and Kidney Tonic and Vitalizer Tablets and Mrs. Summers' Heart, Brain and Nerve Pills (Vanderhoof and Co.), misbranded in that they were sold under therapeutic claims which were false and fraudulent. Compound Syrup of Hypophosphites, Bromo Febrin, Hystoria, Aromatic Cod Liver Oil, Red Cross Kidney and Liver Regulator, White Pine and Tar Syrup, and Boro-Thymine (Cal-Sino Co.), misbranded in that the

therapeutic claims were false and fraudulent (some were also held adulterated because their composition was misleadingly or falsely declared) (*Jour. A. M. A.*, Dec. 11, 1920, p. 1663).

PHYSICIAN'S STOCK IN PRESCRIPTION PRODUCTS.—Is the public getting a square deal when physicians are financially interested in the products that they may be called on to prescribe? Is the average layman's confidence in the medical profession likely to be enhanced when he learns that the physician to whom he went for treatment has a financial interest in the therapeutic agent which was prescribed? It cannot be too often emphasized that it is against public interest and scientific medicine for physicians to be financially interested in the sale of products which they may be called on to prescribe for the sick. It is perfectly true that there are many physicians who would not consciously permit financial considerations to warp their judgment, but it is not humanly possible to remain unbiased in cases of this sort (*Jour. A. M. A.*, Dec. 11, 1920, p. 1662).

THE PARRY MEDICINE CO. BARRED FROM THE MAILS.—For some years Pittsburgh has harbored a quack concern known as the Parry Medicine Company. The president of the company was one Leonard L. Parry, who advertised himself as "Dad Parry, the Healer," and also as "The Miracle Man". In April, 1917, Parry, who is an obviously ignorant faker, was arrested and convicted of the illegal practice of medicine and was sentenced to pay a fine and to serve a six-month sentence in jail. Apparently as soon as Parry got out of jail he went right back to his quackery. As a result the federal authorities took action, and the Parry Medicine Company has been denied the use of the mails. The "medicines" put out by the Parry concern were fourteen in number and were numbered consecutively. They were essentially the same in composition, differing only in flavoring. Each was composed approximately of alcohol, 25 per cent.; water, 25 per cent., and olive oil, 50 per cent., to which was added a few drops of essential oils. No. 1 was for Tuberculosis, Lungs, Bones or Flesh, Gallstones or Tapeworm. No. 2 was for Cancers, Adenoids, Hemorrhoids. Piles, Asthma, Goiter, Typhoid and all other fevers. Extensive curative claims were similarly ascribed to the remaining twelve preparations (*Jour. A. M. A.*, Dec. 18, 1920, p. 1732).

GERMAN INSTITUTE FOR EXAMINATION OF PHARMACEUTICALS.—It is proposed that the commission founded years ago by the German internists—the *Arzneimittel-Kommission*—is to be changed into an institution to investigate new pharmaceutical articles and supply information thereon to physicians on demand. An information bureau and bibliographic center is planned, and it is proposed to test new inventions for the manufacturers. The commission announces that it has been decided not to restrict the examinations to the chemical, pharmaceutical and pharmacologic side of the matter, but in given cases tests and investigations at the bedside will be made. It is stated that the pharmacologic investigations are to be made at the pharmacologic institute of the University of Berlin, which is in charge of Heffter, and that the institute is to be the headquarters of the new Prüfungsamt (*Jour. A. M. A.*, Dec. 25, 1920, p. 1791).

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Adrenalin is effective not only by virtue of its obvious vasoconstrictor action, but also because *it shortens the coagulation time*. This has been demonstrated by Cannon and his co-workers to be true particularly when small doses are injected intravenously or even subcutaneously.

In severe hemorrhages one drachm of Adrenalin 1:1000 in a pint of hot salt solution may be given by hypodermoclysis in the subcutaneous tissue under the breast or by infusion directly into a vein. This is not a large dose of Adrenalin if the hypodermoclysis or the infusion is given slowly.

Adrenalin is oxidized in the circulation so rapidly that the result of this injection is not the tumultuous effect that would be expected of one drachm of Adrenalin; it is rather the evenly sustained ef-

fect of a few minims. Adrenalin restores and maintains the arterial tension, and the volume of fluid introduced into the almost exsanguinated vessels gives the heart something upon which to contract.

Superficial hemorrhages and others which, because of their location, are readily accessible may be treated by the topical application of previously moistened compresses to which are added a few drops of Adrenalin 1:1000. In the category of hemorrhages which are amenable to this local measure are those of the nose, mouth, throat, ear, vagina, uterus, and rectum.

In hematemesis give by mouth about one drachm of the 1:1000 solution. The ingestion of the remedy in this case brings it into immediate contact with the bleeding vessels. In hematuria the injection into the bladder of an ounce or two of a solution of Adrenalin 1:5000 or 1:10,000 is frequently effective.

Because of its vasoconstrictor action, Adrenalin is utilized also as an application to mucous membranes which are the sites of vascular engorgement or inflammation. Dilution to 1:5000 is proper when Adrenalin is used for this purpose.



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ORIGINAL ARTICLES

RENAL TUBERCULOSIS

ITS EARLY RECOGNITION AND MANAGEMENT FROM
THE VIEWPOINT OF THE INTERNIST*

FRANK B. WYNN

INDIANAPOLIS

Tuberculosis of the kidney, like infection from the Koch bacillus elsewhere, may pass through the various pathologic phases from early proliferative changes to terminal necrosis. That this sequence of pathologic change does not always take place is abundantly proved by clinical observation. What abdominal surgeon of wide experience has not seen the peritoneum studded with innumerable miliary tubercles which vanished as if by magic after laparotomy? Not infrequently a diffuse, acute tuberculous invasion of the lungs is seen to clear up beyond our most hopeful expectation. Tuberculosis experimentally produced in animals has been observed to do the same thing. Robert T. Morris injected the parenchyma of the kidney in rabbits with tubercle bacilli. In a month the process was found well developed. The rabbits finally got well. Of the experiment he says: "If these rabbits, depending on their own resources, allowed tuberculosis to get well under way and then placed it under control with their own factors of protection, it is a question if some of our patients with tuberculosis of the kidney, will not be quite amenable to those resources which increase the general resistance of the patient." Reasoning both from clinical experience and experimental investigation is there not ground to believe that new formed tubercles may be eradicated from the renal cortex, especially if treated properly at an early stage?

If the pulmonary apex, in part because of its relative immobility and consequent sluggish circulation, favors tubercular invasion, there is even greater reason for expecting frequent im-

plantation of the tuberculous process in the kidney. The efferent vessels from the glomeruli form an extremely intricate network about the convoluted tubules and down along the loops and into the pyramids—the very regions where new tubercles are most frequently observed. That the tubercular process in the kidney is not discovered early or not at all, argues first our lack of diagnostic skill; or secondly that cure of incipient tuberculosis of the kidney takes place oftener than we have suspected.

Urologists make the observation that patients suffering from renal tuberculosis are often well nourished, especially incipient cases in which mixed secondary infection has not led to extensive inflammatory or necrotic destruction. It is not unreasonable to assume that in incipient cases, the general immunizing forces of the body are good and give hope of successful combat against the invading foe. Unfortunately it is true that the urologist with rare exceptions only sees these cases when rather well advanced, and the cystoscope reveals secondary changes in the urinary tract. This is a reflection upon the general practitioner and internist which should prompt us to greater care and earlier diagnosis. This to the end that not only surgery may have a better chance, but that we also may affect cures in the very earliest cases.

Time was within the memory of some present, when practitioners frequently cloaked their ignorance under such terms as "chronic bronchitis," "anemia," "malaria," waiting for the classical third stage signs before making a diagnosis of pulmonary tuberculosis. With the discovery of the Koch organism a large stride was made toward earlier diagnosis. Then came studies of the pulse and temperature. Still greater laboratory refinement in diagnostic procedure has come in the tuberculin and complement fixation tests—all bringing us nearer to the early recognition of the process when it is possible to subdue the enemy in its infancy. We are no longer content to wait until tubercle bacilli appear in the sputum. We seek to anticipate the stage of pathologic evolution when mixed infection

*First paper in symposium on Renal Tuberculosis read before the Indiana State Medical Association at the South Bend session, September, 1920.

brings about disastrous havoc, liberating necrotic debris and tubercle bacilli in great numbers.

Is it not true that the general profession is showing still the lagging and procrastinating attitude toward the early recognition of renal tuberculosis that characterized our action in regard to pulmonary tuberculosis thirty or thirty-five years ago? Too often we have been willing to veil our ignorance with the diagnosis of "cystitis." In the absence of definite urethral or vesical causes every case of frequent and painful micturition which *persists and resists* treatment of simple nature is to be viewed as a potential tuberculosis of the kidney until proved otherwise. All too often such patients are permitted to drift. Meanwhile the patient is allowed to do those things which are apt to convert the simple and perhaps curable condition into a mixed infection with widespread destruction. The urgent cry, therefore, to the general practitioner is to be on guard.

Given a patient suffering from persistent pain and frequency of urination, let there be made the most painstaking study of the urine. It will generally be found to be pale in color, of low specific gravity and with a slight turbidity. Upon standing the haziness slowly disappears—a thin layer settling to the bottom leaving a clear supernatant liquid. The gross appearance is very different indeed from the urine in other infections of the urinary tract. In the latter the turbidity is due to motile organisms which do not gravitate to the bottom of the vessel upon standing. Almost without exception the reaction is acid—a fact of great differential value since other infections tend to produce an alkaline urine. Of cellular elements the microscope reveals pus cells constantly present. They do not stain so readily as those arising from catarrhal inflammation of the bladder or urethra. The pus is readily miscible upon shaking in a bottle, thus distinguishing it from the lumpy,ropy urine of cystitis. Red corpuscles are frequently found, often in sufficient amount to give the urine a faint, diffuse, pink tinge. Occasional renal epithelial cells will be found; less frequently granular or hyaline casts, indicating some irritation of the renal cortex. This array of clinical and urinary phenomena presents strong evidence pointing to tuberculosis of the kidney.

Thus far the observations and examinations detailed are such as any present day practitioner should be able to make. The next step calls for more expert laboratory and technical procedure. If the medical attendant is not competent to do well that which follows, he should call counsel. Repeated search should now be made for tubercle bacilli, using catheterized specimens of urine to avoid contamination with the smegma bacillus. Failure to find the Koch bacillus should not ex-

clude the diagnosis of renal tuberculosis. The truth is that in very incipient cases they are not likely to be found. Inoculation tests may then be made. Catheterized pus cells are injected into the peritoneum of guinea pigs. This is open to the objection that from four to six weeks would be required for demonstration of tubercles in the peritoneum or lymph glands in positive cases. And it has been argued that even a positive guinea pig reaction does not prove tuberculosis of the kidney since it is thinkable that the Koch organisms from some other focus infecting the blood stream may pass into the urine without infecting the renal tissue. By analogy it is argued that in contamination of the blood current with typhoid organisms, the kidney generally eliminates them without becoming diseased.

Even in the absence of demonstrable tubercle bacilli in the urine or positive results from guinea pig inoculations, strong confirmatory evidence will be found in support of the preceding suggestive data, if there is revealed a tubercular family history with possible exposure. Just as significant likewise will be a personal history of repeated "colds"; prolonged pneumonic attack; a scar in the neck or a chronic joint difficulty in childhood. It goes without saying that the most scrutinizing physical examination should be made of the chest and x-ray evidence sought of healed or active lesions.

Any case which presents an array of symptoms at all suggestive of renal tuberculosis should be subjected to cystoscopic and x-ray examination and functional kidney tests. In the hands of one thoroughly competent these may reveal focal lesions and determine the kidney involved.

In the incipient period of renal tuberculosis when diagnosis is difficult and doubtful, the cautious use of tuberculin subcutaneously is of unquestioned value. We are slowly recovering from the wave of prejudice against tuberculin which swept over the profession soon after its discovery. It is gradually but surely coming into its own both in diagnostic and therapeutic procedure. The subcutaneous injection of tuberculin for diagnostic purposes in renal tuberculosis should only be performed in hospital environment and by one skilled in its use. The initial dose will be determined by the age and physical condition of the patient. In the average adult Pottenger advises 1 milligram as the initial dose. If no reaction occurs, in two days from 3 to 5 milligrams are given. No reaction appearing in three days, 7 or more milligrams are administered, 10 being the maximum dose to complete the test. A general reaction with rise of temperature of one or more

degrees is considered positive. Even more important than observation of the general reaction is a careful study of the focal reaction. The latter is evidenced by increased pain in the loin, marked aggravation of the urinary function, increased pus discharge and now tubercle bacilli may be found in the urine.

Complement fixation is the most recent addition to the laboratory methods of tubercular diagnosis. A majority of laboratory workers commend it as invaluable. Craig rates its value in the diagnosis of tuberculosis as fully equal to that of the Wassermann reaction in syphilis. A few doubt its practical efficacy. Whilst the preponderating view of clinical and laboratory workers is that in considerably over half of the cases it will give a positive reaction, it does not possess great value in the recognition of renal tuberculosis. Like the von Pirquet and Calmette reactions, it only points to a tuberculous process somewhere in the body but gives no clue as to its location. Hence inferior practically to the subcutaneous tuberculin test, which gives a focal kidney reaction.

Having established beyond reasonable doubt the existence of renal tuberculosis, it remains for the urologist to determine whether the disease is unilateral or bilateral. Here cystoscopy, functional tests and radiograms offer valuable information which will be considered by others more competent than the writer. If only one kidney is found involved, let us not quibble with the surgeon about the correct procedure. The case is surgical. Dock expresses the sentiment of most internists at the present time when he says: "Extirpation of the affected kidney is conservative treatment."

From the internists viewpoint the incipient case of renal tuberculosis is not without hope when treated with the same care and in similar manner to other tuberculous cases. Prolonged rest, nutritious food and good air will avail even more than in pulmonary cases, since the digestive and assimilative powers are not as a rule impaired. Tuberculin is proving itself valuable, notably in the treatment of tuberculosis of the lymph glands, and in other forms of tuberculosis when carried out under the careful regime of competent institutional management. In any form of tuberculosis that individual most likely to be benefited by tuberculin is the one in whom the functions come near to par. Such a person has a capacity to produce antibodies, and is therefore in condition to give immune response. Fortunately in the majority of cases of incipient renal tuberculosis the strength and natural resistance are good. Hence there is ground to expect benefit from tuberculin treatment, cautiously and wisely applied, under institutional supervision. Combined with rest, proper food and hygiene it is not too much to hope for cure

in a limited number of cases. Its use should be encouraged in anticipation of and preparatory to operative measures. Its applicability is evident in bilateral cases and in those who refuse operation. That it often does give brilliant results, even in advanced cases, is attested to by no less an urologist than W. T. Belfield. In a clinic before the American Urological Association in 1911, he presented six cases of urogenital tuberculosis in males treated by tuberculin, in whom such improvement had taken place that he expressed the view that in genital tuberculosis the knife had no place except to remove debris.

CONCLUSIONS

1. Let practitioners and internists take heed early of symptoms suggestive of an incipient and developing tuberculosis of the kidney. Prompt use of every available means of diagnosis should be employed to the end that early diagnosis may be established.

2. When unilateral tuberculosis of the kidney is proved to exist, nephrectomy offers the shortest and surest road to recovery. Dallying in such cases is inexcusable.

3. There is substantial reason for believing that earlier diagnosis in this as in pulmonary tuberculosis, and the faithful and intelligent application of proper treatment—rest, hygienic, dietetic and therapeutic measures—may enable arrest or cure of the disease. But this plan should never supplant surgery when there is proved unilateral tuberculosis of the kidney or there is evidence of retrogressive changes.

RENAL TUBERCULOSIS ITS DIFFERENTIAL DIAGNOSIS*

BY H. O. MERTZ
INDIANAPOLIS

The portion of the kidney involved, the condition of the ureteral channel, the presence of an associated mixed infection—these are the factors rendering a diagnosis of renal tuberculosis comparatively simple or extremely difficult. A renal tuberculosis extending into and involving the calices and pelvis, resulting in an open tuberculous pyelitis, gives specific evidence of its presence by means of tubercle bacilli in the urine and it is this lesion, whether primary or secondary, that is diagnosed by the detection of this bacillus. Should there exist, at the time of the examination, a closed tuberculous pyelitis or pyonephrosis, no material from the infected site reaching the bladder because of an occluded ureter, the diagnosis can not be made by this means, and a negative urinary examination can be expected in many of such cases. Again

*Second paper in symposium on Renal Tuberculosis read before the Indiana State Medical Association at the South Bend session, September, 1920.

when the primary lesion is a closed parenchymatous tuberculous focus, such evidences of a tuberculous pyelitis are not present, and the diagnosis of this tuberculous process is at present a very different and more difficult problem. Finally, when any renal tuberculosis having free drainage to the bladder is secondarily infected, this superadded mixed infection may give urinary findings of sufficient prominence as to render the detection of the primary infection extremely difficult. Therefore in the differential diagnosis of a renal infection the finding of the tubercle bacillus in the infected urine is sufficient, while its absence in no sense declares it not to be of tuberculous origin.

The symptoms leading one to suspect the existence of a renal tuberculosis have been previously reviewed in this symposium. Our first means of differential diagnosis is the examination of the urine for the tubercle bacillus.

Tubercle bacilli may be detected in the urine by: (1) the staining of the urinary sediment, with the technic of which all of you are familiar, but which knowledge is not uniformly employed as of 24 records studied, in but three was there history of there having been such examinations made before seeking counsel; (2) guinea pig inoculation, which gives positive data in many questionable cases, and which method is probably not employed by the consultant as faithfully as its worth warrants. While occasionally the urine may be comparatively free of pus, in most cases much pus is present when the following method gives best results in securing urinary sediment: A sample of a 24-hour specimen of urine is centrifuged at a speed of 300 revolutions per minute for three minutes. The remaining supernatant, slightly cloudy urine is again centrifuged at a high rate of speed until the urine is clear. This last sediment contains a greater number of tubercle bacilli and is used for staining and inoculation purposes. The difficulty of finding the germ in the presence of marked mixed infection warrants conscientious employment of this method. Dissolving the cellular elements and mucus by the addition of antiformin accomplishes similar results for staining, however this method requires several hours incubation at a regular temperature. In making a differential diagnosis by the staining method there are two possible sources of error: (1) smegma bacilli may be mistaken for tubercle bacilli, and (2) a tuberculous free kidney may secrete the tubercle germ which can be found in the urine. The first is important and it influences the method of collecting urine for a final diagnosis, and the second should be kept in mind as a possibility in the obscure case, but every effort to eliminate an existing urinary

tuberculosis should be made before accepting this explanation of the presence of tubercle bacilli in a urine containing other evidences of inflammation.

Many modifications in the technic of guinea pig inoculation have been suggested because of the length of time necessary before a diagnosis can thus be made, and because of its often resulting in failure through early death of the pig from mixed infection. As to the former, this objection is more apparent than real, as it is the obscure case whose symptomatology has covered many months, which most frequently demands this method for other than corroborative data, and a positive diagnosis within this time limit by other means is often not made. It has been asserted that bruising the tissues at the site of the inoculation, as the inguinal glands, or primarily subjecting these to the action of the x-rays, favors invasion and dissolution, permitting earlier detection of the tubercle bacillus. Biologic tests have been applied to the inoculated pig, as if old tuberculin be injected hypodermatically two weeks after inoculation, should there have been a tuberculous process produced, it is claimed the pig's temperature will rise two or three degrees; or should the size dosage be large enough it will fall during the following twenty-four hours and in many cases the pig will die. The von Pirquet reaction may be secured ten days after inoculation and is interpreted as in the human. While these latter are of value, such data can not be so convincing as the finding of the tubercle germ in a typical lesion at autopsy.

The value of the hypodermic tuberculin test in the cases with obscure clinical symptoms, with no tubercle bacilli being found in the urine, whether the result of the location of the process, the mixed infection or an occluded ureter, is illustrated in the following instance: A man aet. 22, six months previous to consultation developed without known cause burning and frequency of urination and two weeks before examination a terminal hematuria. There was no venereal history. The infection was proved limited to the left kidney but the tubercle bacillus could not be found. .5 mg. of old tuberculin injected hypodermatically produced local pain over the left kidney region and an aggravation of his dysuria, which required morphine to quiet. The temperature was elevated. Not considering these data sufficient, the search for the germ in the urine was continued. The patient went elsewhere where similar findings were made and the left kidney was explored as a probable tuberculous organ which it proved to be. It is the focal reaction that is of most value in a differential way and subacute tuberculous processes in other portions of the body contra-indicate its employment.

An accurate differential diagnosis of renal tuberculosis can not be made without a cystoscopic examination and catheterization of the ureters.

Cystoscopic evidences of an existing urinary tuberculosis vary from the single, isolated, specific tuberculous lesion—the submucous tubercle—to a generalized tuberculous cystitis in which the active tuberculous processes in the bladder may be completely overshadowed by the super-added mixed infection, when only the rather typical irregularities of the ureteral meatuses or bladder cavity may suggest the tuberculous nature of the infection. The greatest value of the cystoscopic findings in vesical tuberculosis is not that they enable a diagnosis of the type of infection present, but that they eliminate foreign bodies and tumor growths as the cause of the bladder symptoms while not infrequently indicating the probability of an existing renal infection oftentimes permitting accurate judgment as to the side involved. Finally there are cases of renal tuberculosis in which the bladder changes are so slight and indefinite as to be of no value as an aid in detecting its presence, hence negative cystoscopic finding can not always be considered conclusive evidence of the absence of a tuberculous infection of the kidney.

The active tuberculous lesion in the bladder in renal tuberculosis is most often about or near the ureteral orifice corresponding to the kidney involved. There is probably a rather definite progress of the changes about the opening, and the cystoscopic findings will depend much upon the stage of the bladder infection when the examination is made. The earlier alterations are a more or less circumscribed areolar redness, the subjacent mucosa being edematous with small submucous tubercles in its substance. The orifice may be relaxed. From this point it would seem there are two distinct types of changes—the one tending toward granulation and massive edema formation, the second ending in ulceration and contraction. The former may be so extensive that it will completely hide the ureteral orifice, at times approaching the appearance of a neoplasm and may be mistaken for such. The latter results in distortion of the orifice, which is open and rigid, and as a similar process is usually occurring in the corresponding ureter the tube is shortened so that the orifice will be retracted and drawn far up from its normal position in the bladder. As the disease advances in the bladder its distensibility becomes less and less until but a little fluid will be tolerated at a time, and while this intolerance to distention is valuable in a differential way, it complicates cystoscopy occasionally rendering it impossible until functional rest of the bladder has been established by drainage.

The sub-mucous tubercle is a small grayish-yellow nodule situated beneath the mucous membrane. However, there are other lesions of the bladder not tuberculous in origin that resemble these so closely that a differential diagnosis from this alone may result in error. A tuberculous infection is suggested if when these ulcerate they are isolated ulcerations, the well defined narrow margin of areolar redness about them being surrounded by a more normal appearing mucous membrane; or if it appears to be one-half of the periphery of the nodule that has lost its mucous covering, a more or less crescent-shaped ulceration popularly called the "finger scratch" ulcer resulting; or if the ulceration is situated at the junction of several small arteries.

Ureteral catheterization is the most important single procedure in making a differential diagnosis of renal tuberculosis. By only this means can we know (1) the condition of the ureteral channels; (2) the presence or absence of tubercle bacilli in the urine as it leaves the kidney pelvis; (3) if the infection is unilateral or bilateral; and (4) the comparative functional value of the two kidneys.

While catheterization of the supposedly good kidney is not universally practiced, we do not hesitate to do so and do not see that untoward results have followed. A tuberculous ureter secondary to a renal tuberculosis is usually difficult to catheterize, and urine from a tuberculous kidney may be reaching the bladder and yet it be impossible to catheterize this diseased ureter. This may be the result of the condition of the ureteral orifice, the intolerance of the bladder, a strictured condition of the ureteral channel or the skill of the operator. Oftentimes a ureter which can not be catheterized at the first examination may, after proper preparatory treatment, be readily entered at the second. The ureter may be occluded, the result of inflammatory changes, when an attempt to reach the kidney by catheter must end in failure. Also with a demonstrable tuberculosis on one side, should there be detected a strictured or distorted condition of the opposite ureter, although tubercle bacilli are not detected in the inflammatory products from the second kidney, a most careful investigation is necessary before asserting the process is unilateral. This is equally true in those rare instances of occluded renal tuberculosis on one side with an open ureter on the opposite side, the corresponding orifice being retracted and the urine from this side infected.

An acid fast bacillus found in a urine drawn from an inflamed kidney by a ureteral catheter resting in its pelvis, can practically always be considered the tubercle bacillus, indicating a tuberculous pyelitis. However, it must not only be detected on one side but eliminated on the

other. The study of the urine from the supposedly well kidney is one of the most important problems in a differential diagnosis of renal tuberculosis. Tubercle bacilli will occasionally be found on the supposedly free side only, or a bilateral tuberculosis may exist where but a unilateral disease was expected. A toxic nephritis on the supposedly good side with an inflamed kidney on the opposite side, in the presence of characteristic clinical and bladder findings, although tubercle bacilli can not be found, or when the opposite ureter is occluded, may justify a diagnosis of unilateral renal tuberculosis.

• For the functional estimation of the kidneys we rely upon the urea content of the urine and the phthalein output, occasionally supplemented by the estimation of the blood urea. Although the amount of urine is often greater from the involved side, a fact of differential value, there will be a lessening of the urea concentration, and albumin is usually present in the urine from a tuberculous kidney. These are especially valuable observations in the case of a closed parenchymatous tuberculosis, in which the cystoscopic and bacteriological findings are at best indefinite, and they may be the only findings upon which a tentative differential diagnosis can be made.

In conclusion, tubercle bacilli in the urine from a diseased kidney means tuberculosis on this side. Its absence does not eliminate the disease. Cystoscopy and ureteral catheterization are of value in the obscure case and necessary in every case coming to surgery. Not infrequently repeated examinations are necessary and a differential diagnosis may take many weeks, occasionally many months, or may rest upon a justified surgical exploration.

RENAL TUBERCULOSIS

ITS PATHOLOGY*

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It is my purpose in the following pages to present a brief summary of the chief pathological features of renal tuberculosis. A few points and opinions have been drawn from personal experience, but in the main it is the aim to let this discussion reflect as clearly and concisely as it may, the present status of opinion of investigators, pathologists and urologists.

The development of accurate knowledge in this field coincides in point of time with that of the development of modern medicine as a rational science. This took place during the period from 1885 to 1900, and was made possible by the preceding developments in pathology and

bacteriology, and particularly by precise knowledge concerning the tubercle bacillus and the characteristics of tuberculous infection in general. In 1883 Babes first demonstrated tubercle bacilli in the urine of a patient with renal tuberculosis, which marks the first application of this valuable diagnostic test. During the period from 1890 to 1900 the modern methods of cystoscopy and ureteral catheterization were developed. Thus our present knowledge of renal tuberculosis, the techniques for its recognition and treatment, represent a superstructure built upon the foundations which were laid during the fifteen-year period beginning in 1885.

The routes by which tuberculous infection may reach the kidney are: By direct infection from a neighboring focus; infection by way of the lymphatic system; infection ascending from the bladder via the ureters; and infection by way of the blood stream.

A tuberculous infection of the vertebrae or of the adrenal gland or of the lymph nodes or other perirenal tissue may extend and involve the kidney tissue directly. A number of such cases may be found in the literature. One case upon which I performed autopsy examination had an extensive caseous tuberculosis of the left adrenal gland. The infection had penetrated the kidney capsule and extended into the upper pole of the kidney forming a caseous mass 1.5 cm. in diameter. Such cases are not rare, but they represent a negligibly small percentage of the total occurrence of renal tuberculosis.

Infection by way of the lymph vessels is of infrequent occurrence since the lymphatic drainage is from, not toward, the kidneys.

The earlier investigators held that the disease developed primarily in the genital organs or in the lower urinary tract, and spread to the kidneys as an ascending infection by way of the ureters. This view originated by reason of the symptoms of bladder irritation which were a prominent feature in the patient's complaint, and which were produced by involvement of the bladder. As we now know, renal tuberculosis may become very extensive before subjective symptoms are produced, and when such symptoms develop they are due usually to the spread of the infection to the lower urinary tract. The first symptoms being found in the bladder or genitals, the early observers reasoned logically that the primary infection occurred there, and that the kidney involvement was secondary. This view was generally accepted in former years, and evidence of a contradictory character called forth a protracted debate as to the actual route of infection in such cases. The ultimate effect of this debate was good, since it stimulated search for facts to substantiate or refute the theories. Soon it was shown that in

*Third paper in symposium on Renal Tuberculosis read before the Indiana State Medical Association at the South Bend session, September, 1920.

all cases of tuberculosis of the bladder the kidneys were also involved. This could hardly be the case if the infection originated in the bladder, since some early cases of bladder infection would be recognized before the process had extended to the kidney. Then it was shown that in tuberculosis of the kidney the lower urinary tract was free from infection in about 50% of cases. Obviously these 50% could not be explained as ascending infections. By animal experimentation it was found that infection of an uninjured bladder did not follow the injection into it of tubercle bacilli. Also that when tuberculosis of the bladder was experimentally produced the infection did not extend to the kidneys. In order to produce renal tuberculosis via the ureters it was found necessary to inject the bacilli directly into the ureters and to ligate or otherwise obstruct the ureteral lumen below the injection. By such a procedure infection of the kidney resulted in a fair percentage of cases, but it must be admitted that conditions analogous to these would rarely be present in the human subject. Further it was found that infection of the kidney could easily be produced by introducing tubercle bacilli into the arterial circulation, particularly by making the injection directly into the renal artery.

The consensus of present opinion, based upon human pathology and animal experimentation, is that the blood stream is by far the most important avenue of entrance, and that infection never occurs primarily in the bladder. The possibility of tuberculosis occurring in one kidney, extending to the bladder, and subsequently ascending to the opposite kidney by way of the ureter still remains. But in this case acute retention of urine in the bladder or intermittent obstruction to the ureter would be necessary conditions to facilitate the ascent of the infection. It is probable that few infections occur by this route, the majority of bilateral tuberculous involvement occurring, as do the unilateral infections, by way of the blood stream.

As to the occurrence of renal tuberculosis, there is rather wide variation in the percentages given by different authorities. In 14,500 autopsies quoted from various institutions by Kelly there was an average occurrence of renal tuberculosis of slightly more than 4%. This group of autopsies were of deaths from all causes. The frequency of renal involvement in tuberculous cases varies from 12%. Walker's report, to 33% in Brown's series. The combined average of reported series is about 20%. That is, out of every five cases of active tuberculosis, one case on the average will have renal tuberculosis. In considering these figures it should be borne in mind that they necessarily include many cases of generalized miliary tuberculosis, in which condition a bilateral miliary tubercu-

losis of the kidneys occurs in almost every case. Miliary tuberculosis occurs frequently in children and hence the renal involvement is high in this group. On the other hand the caseous or caseo-cavernous type of renal tuberculosis is a disease of young adult life. It is rare in children and uncommon in old age. Wildbolz, in 315 cases, found 224 between the ages of 20 and 40.

On entering the kidney by way of the blood stream the tubercle bacilli are most frequently lodged in the narrow capillaries of the glomeruli, though they may lodge in other parts of the parenchyma as along the course of the uriniferous tubules. These points then are those in which tuberculous infection of the kidney most frequently begins. It has been shown that tubercle bacilli may pass through the capillaries of the glomeruli or through the epithelium of the tubules and into the urine without producing foci of infection in the kidney. Walsham demonstrated tubercle bacilli in the glomeruli and in the epithelium of the tubules in cases of active tuberculosis in which there were no demonstrable kidney lesions. Foulerton and Hillier inoculated guinea pigs with the urine of 18 cases of pulmonary tuberculosis. Nine of the pigs developed tuberculosis, and three of the cases from which they were inoculated showed no trace of renal tuberculosis at autopsy. Fournier and Beaufume were able to demonstrate tubercle bacilli in the urine of almost every case of pulmonary tuberculosis by guinea pig inoculation. This is a significant finding, and calls to mind the demonstration that tubercle bacilli may pass through the intact mucosa of the bowel without producing a lesion. Also that in active tuberculosis of cows the bacilli may frequently pass through into the milk without producing tuberculosis of the udder. Apparently it is possible for tubercle bacilli to be absorbed through the bowel, secreted into the milk or excreted into the urine without producing local infections of the tissues through which they pass. This fact is of further significance, since it indicates that the finding of tubercle bacilli in the urine by animal inoculation does not necessarily mean tuberculosis of the kidney.

Tuberculosis produces the following types of infection in the kidneys:

(1) Miliary tuberculosis, in which numerous small tubercles are widely scattered throughout the kidney substance. The characteristics of these lesions are not different from those occurring in miliary tuberculosis of other organs. Typically there is some epithelial proliferation, an accumulation of large mononuclear or "epithelioid" cells, surrounded by varying numbers of lymphocytes. Giant cells may or may not be present, and necrosis or caseation is usually

found in the older lesions. Miliary tuberculosis of the kidneys is only one of the manifestations of a general miliary tuberculosis. It is blood borne in distribution, is bilateral almost without exception, and is said to be uniformly fatal. I have been unable to find a reported case of recovery. The condition is of no practical interest to the surgeon.

The caseous, or caseo-cavernous type is another form of renal tuberculosis. This begins as a solitary focus near the base of a papilla, usually in the upper or lower pole. It spreads by three routes: First, by enlarging peripherally it involves progressively more and more of the adjacent tissue. Central necrosis and liquefaction in this nodule produces abscess formation; second, the abscess may open and discharge into the kidney pelvis at which time the urine would contain quantities of pus, debris and tubercle bacilli. Before rupture of the abscess occurs the infection has usually been carried by the urine into the pelvis giving rise to extensive tuberculosis of the lining of the pelvis and of the ureter. Extension of this infection widens the calices and encroaches upon the cortex. The third route of spread is toward the cortex by way of the lymph vessels. Wedge shaped areas of radiating white lines are frequently seen, the apex of the wedge being the original infection, and the base being the cortical surface of the kidney. On reaching the surface the infection spreads readily, extending between the capsule and the cortical surface.

Caseous tuberculosis of the kidney is a progressive process, beginning with an almost invisible focus of infection and ending with complete destruction of the organ. Intermediate stages of all gradations between these extremes may be found at operation or post-mortem. As the process extends, massive areas of infection are formed which eventually become caseous resulting in progressive destruction of kidney tissue, the end point of which is a tuberculous pyonephrosis, in which the organ has the configuration of a multilocular cyst. The cavities of this are usually communicating, and are filled with thick, pasty, tuberculous pus and tissue debris. This type of tuberculosis in any of its stages is spoken of as "Surgical Tuberculosis of the kidney," to distinguish it from the miliary type which is not amenable to surgical treatment. In about 55% of cases this type is limited to one kidney. The end point of the process above described, in which the organ is represented by a thick fibrous wall enclosing irregular cavities of pus, and in which the ureter and blood vessels have become transformed into fibrous cords, represents as near an approach to healing as probably occurs. Such a result is not really healing, but represents a successful attempt on

the part of the body to wall in the infection and thus prevent its direct extension to adjacent tissues. This end point is sometimes spoken of as "autonephrectomy." Most authors claim that healing of a tuberculous focus in the kidney, except as just described, does not occur. However, there are sometimes found in the kidneys of tuberculous patients, small areas of fibrous scar tissue in which no active tuberculosis is present, and which, if a tuberculous origin could be established, would be considered as healed lesions of tuberculosis. The burden of proof is here placed upon the investigator, and in order to establish that spontaneous healing has occurred he must establish: (1) that those lesions are of unquestionable tuberculous origin, and (2) that no focus of active tuberculosis remains in the organ. The latter point could only be established by making serial microscopic sections of the entire organ and examining each one thoroughly for tuberculosis. To examine one kidney in this fashion would require a minimum time of five years. Obviously most investigators prefer to admit that even small tuberculous foci in the kidney do not spontaneously heal, though the possibility remains that such healing may, though rarely, occur.

Tuberculosis of the kidney sometimes involves adjacent structures by direct extension, producing perirenal abscess. This complication is uncommon, and when it occurs is more often a mixed infection of tuberculosis with pyogenic organisms. It is readily understood that mixed infections of tuberculosis with other organisms will produce wide and extensive variations in both the character and course of renal tuberculosis. That in caseous tuberculosis of the kidney the ureter and lower urinary tract are regularly involved is understood.

RENAL TUBERCULOSIS

VALUE OF ROENTGENOGRAPHIC DIAGNOSIS*

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Several articles were published last year concerning the value of roentgen findings in the diagnosis of renal tuberculosis. These articles by Braash and Olson of the Mayo clinic, and Colston and Waters of Johns Hopkins, are the first that I have seen on the subject. Burchard, a foreign writer, has made a thorough review of the literature. The majority of urological men in this country have not appreciated the importance of the x-ray diagnosis and there has been little said of its value in renal tuberculosis. The x-ray has been limited to the diagnosis of renal calculi, bladder stones and

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maybe now and then the making of a pyelogram. New and modern apparatus, the double intensifying screen with duplitized films, and the use of suitable opaque solutions have made a great change toward better diagnostic roentgenograms.

Some of the larger clinics have every case of suspected tuberculosis of the kidneys given a thorough roentgenographic examination of the urinary tract. At the Methodist Hospital in Indianapolis the urologists have given the x-ray department every chance at their suspected cases and in a large per cent. we have given them valuable help. In several cases impossible for them to diagnose we have been able to show calcifications in the kidney or ureter. The Mayo clinic has been able to show 22 per cent. of positive shadows and signs of tuberculosis. One out of five subjects with renal tuberculosis will have positive roentgenographic data of definite diagnostic value. The value of the x-ray has been summed up by Braash as follows:

1. When, because of contracted condition of the bladder or impassable stricture of the ureter, the cystoscopic findings are inadequate.

2. When the cystoscopic findings are not typical of renal tuberculosis.

3. When the clinical findings are not suggestive of renal tuberculosis or of any involvement of the urinary tract as may occur with closed tuberculous pyonephrosis.

4. In the presence of bilateral renal tuberculosis, when the typical shadows frequently render cystoscopic or further examination unnecessary.

When any of these four conditions present themselves, we have found the x-ray of particular value. It is in these cases we try to show the kidney shadow, or areas of calcification by taking a series of films of different densities by using filters. We sometimes take six to ten films of the one kidney region and a series covering the entire urinary tract. A close study of these films is very necessary, watching for any calcification along the tract of any prominence or mottling of the kidney shadow. The proper illumination of the film is very important in this study.

The shadows found are caused by the deposit of calcium in the tuberculous area. They are more or less characteristic in that they vary in size, shape and density and are irregular and definite in outline. They do not have the appearance of renal stones but of course in some cases they are very hard to differentiate; then the clinical picture must decide. The shadows on the plate are seen either as single or a few localized areas, or as multiple small areas which are scattered one centimeter or more in diameter.

The first type of small shadows are usually found as punctate spots in one of the poles of

the kidney. Occasionally we find them to be large, irregular and of various densities which involve a large part of the kidney. The size of the shadows does not as a rule decide the amount of tuberculosis in the kidneys.

It is of utmost importance in making roentgenographic examination of the kidneys that the patient be prepared by having a dose or more of the compound licorice powder before the examination so that the bowels are well cleaned out. Enemata and salines are all liable to give poor plates because of the retained water and gas in the bowels. If proper preparation is not done the kidney shadow may not show on the plate, and if it does there may be shadows of fecal matter that will look like calcifications. Sometimes the shadow of the kidney is slightly exaggerated in one area; in this case we must be suspicious and a series of films is advisable. It is always good to examine the other kidney; at times the shadow of the opposite kidney will show hypertrophy.

The pyelogram is another means of diagnosing renal tuberculosis. This procedure is no longer dangerous if one selects his cases carefully, and uses good technique. I have been present at a large number of injections and with the present careful watch of the patient for pain in the kidney region, I have yet to see a bad result. Measure the amount of the opaque solution injected. In cases where the approximate size of the pelvis is not known the injection can be done under the fluoroscopic screen to a good advantage. The use of thorium, sodium or potassium bromide in 15 to 25 per cent. solution has made the work safer and there is never the bad after results that we used to have with the thick solutions of colargol, argyol, and cagentos. The thorium, sodium, iodide or bromide solutions can be withdrawn as soon as the plate is made, and there is no plugging of the ureter or acute hydronephrosis produced from the examination. The pyelogram in renal tuberculosis gives usually a large inflammatory pelvis with some irregularity, lengthening of the major calices with bulbous dilatation of the tips, and now and then denser areas where there is cortical necrosis. The ureter may show dilatation and stricture. The calices in early cases show irregularity of dilatation. The disease may be confined to one or two calices and may give a moth-eaten appearance at the apices with some extension into the parenchyma.

In the advanced forms we have the necrotic areas filling up throughout the kidney or all coalesce to form a large sac. As the disease advances we find the ureter to become dilated from the inflammatory process and in some cases from stricture formation, we may have calcification of part of the ureter. The bladder

will also show irregular contraction on one side. Cystograms using air or opaque solution are very helpful. The opaque solution will cause the ureter to fill sometimes to the kidney pelvis. Air may give the shape of the bladder which is an aid in showing calcified areas or calcification of the lower ureter.

CONCLUSIONS

1. The use of the x-ray in diagnosing renal tuberculosis is new and is not yet appreciated.
2. By the use of filters and different penetrations, a series of films of different densities of the entire urinary tract should be made in all suspected cases of renal tuberculosis.
3. One out of five cases of renal tuberculosis will show definite roentgenographic signs. Other methods of diagnosis may have failed and the x-ray alone may diagnose it.
4. Proper illumination in the study of the films is of the utmost importance. The shadows found are caused by the deposit of calcium in the tuberculous area. They may vary from small indefinite punctate areas to the characteristic lobulated, mottled shadow which is typical of a completely destroyed kidney.
5. Preparation of the patient for the examination is very important.
6. Pylosopic and pylographic examinations are of value in early inflammatory infection of the kidneys.
7. Cystogram of air and opaque solutions are helpful in showing the bladder conditions.

RENAL TUBERCULOSIS

ITS SURGICAL TREATMENT*

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The possibility of spontaneous cessation of symptoms, and return to apparent health, in renal tuberculosis must be admitted; but dependence upon general measures of treatment to effect a cure is dangerous, because of the progressively destructive character of the disease.

To depend upon clinical signs for healing of renal tuberculosis, one must apply the most rigorous tests and even if they seem to indicate healing, the process may be upon the point of becoming more active and fatally so.

Often these supposed cures consist in exclusion of the tuberculous focus, the apparent cure being obtained at the price of functional suppression of the organ. Some of these cases in whom the excluded kidney gives the illusion of a cure have all the appearances of having regained health. Sometimes symptoms have ceased to exist for a long time—ten, twelve or

more years. Such remissions are characteristic of the slow evolution of the disease. That the apparent cure, by excluded kidney, is but a delusive appearance is demonstrated by the nephritic alterations developing in the other kidney as a latent factor rendering the existence of the individual extremely precarious. The process of exclusion of a tuberculous kidney is capable of explaining the subsidence of urinary symptoms, but it should not be considered as a curative process in the real sense of the term.

In exceptional cases, ureteral catheterization has enabled one to collect from a kidney, previously determined to be tuberculous, absolutely clear urine, proving both the disappearance of infection and the persistence of kidney function. This is the indispensable criterion necessary that a cure be considered as real.

Heitz-Boyer¹ has shown that in such cases the cure implies not necessarily a curative process in the sense that there is a retrocession of the lesions with re-establishment of function of the affected part, but that it may be the question still of the phenomena of limited exclusion—this time of the diseased portion of the kidney.

Recognizing that an improvement in general condition followed the use of tuberculin in many cases, Wilbolz² thought that a corresponding healing might take place in the infected kidney. In four cases, he used tuberculin for two to twelve months before operation with improvement in general health and with some benefit as regards symptoms. He did a nephrectomy in all of these cases and examined the kidneys carefully to see what, if any, healing had taken place. Nowhere was he able to find evidence suggesting a true healing process.

The same author³ records his conversion from medical to surgical treatment of renal tuberculosis. He cited 78 cases, which three years after nephrectomy were divided as follows: 59% alive and cured; 21% alive and tuberculous; 20% dead. To compare with these, he collected 316 cases under observation in sanatoria. 70% of these died within two years, and of the 95 survivors, 65 still suffered from urinary tuberculosis, while only 30 had been relieved of their symptoms. In 16 of these the clinical cure had persisted for over five years, but after years of apparent cure, sudden breakdown and death were known to have occurred.

Cabot and Crabtree⁴ express the view that "the tendency to watchful waiting which was generally but another name for medical procrastination, has considerably abated, and there is practically no difference of opinion among

1. M. Heitz-Boyer; Jour. de Urol. No. 2, 1912.
2. Wilbolz; Wien. Med. Wochchr. No. 3, 1911.
3. Wilbolz; Correspondenz-Blatt, Schweizer Aerzte, Dec., 1912.
4. Crabtree and Cabot; Jour. S. G. & O. 1915, XXXI, 669.

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those qualified to express one, that in unilateral renal tuberculosis operation affords the only chance of cure."

Technique: The lumbar approach is usually chosen. A few surgeons prefer the trans-abdominal route on the belief that the operation can be more completely accomplished, i. e., the kidney and the entire ureter may be removed through one incision of moderate extent. Also, in cases where the kidney is considerably enlarged and adherent to important structures, lessened danger to these structures is claimed. Ordinarily, however, the oblique loin incision with variations to fit the individual case, will give access for removal of a much enlarged kidney.

The management of the ureteral stump has received wide discussion. The variety of ways suggested indicate that the ideal method has not been attained.

The more extensive operation for complete removal of the ureter may possibly hasten healing of the bladder infection and help to prevent wound infection and sinus formation, but reports do not indicate an advantage sufficient to offset the added severity of the operation.

Complete nephro-ureterectomy, including a portion of the bladder wall, did not accomplish the hoped-for results in that it did not prevent sinus formation.

Braasch,⁵ commenting upon the results obtained at the Mayo clinic, says: "Ureterectomy did not seem to affect the aftercourse materially. In 14 patients in whom ureterectomy was done with the nephrectomy, the sinus persisted fully as long as in the others."

Isreal⁶ believes that tuberculosis of the ureter will be cured spontaneously after nephrectomy in the majority of cases; that fistulae will develop in 11.5%, mostly healing within four years; and that the method of providing for the ureter has no marked influence upon the frequency of fistulae formation.

Most surgeons are content to remove as much as possible of the ureter through the lumbar incision. This is usually to the pelvic brim or just below. A long stump may not be more infectious than a short one, but the pathological condition of the ureter should modify the technique. Albarran advises resection of the ureter, if it is very thick and the lumen on cross section is dilated, on the belief that it is this type of ureter which allows bladder urine to flow upward and infect the wound.

Injecting the ureter with carbolic acid and fixing the ureteral stump to the skin in the lower angle of the wound have been advocated to promote more rapid healing of the ureter and as a means of preventing wound infection.

The removal of fatty capsule, or as much of it as possible without injury to surrounding

structures, will help to prevent wound infection and fistula.

Closure of the wound without drainage apparently tends to prevent secondary infection, and primary healing takes place in a fair proportion of cases. Cabot and Crabtree⁴ observed in a series of 70 cases that approximately 25% healed by first intention and 75% developed fistula irrespective of the method of wound closure employed. In undrained wounds, sinus formation may occur as a late development.

Contra-indications to nephrectomy: Any general condition, contra-indicating a major operation; the existence of active tuberculosis elsewhere in the body, (as active pulmonary tuberculosis), advanced tuberculosis of the opposite kidney or marked nephritis or any lesion greatly decreasing its function, are contra-indications to nephrectomy for renal tuberculosis.

Observation of decided improvement in the function of the remaining kidney, in cases of bilateral renal tuberculosis, after removal of the worse affected one and the subsidence of symptoms with a tendency to general improvement has led surgeons to a more favorable view of nephrectomy where bilateral involvement exists.

Keyes⁸ states, "Involvement of the other kidney was for a long time considered a contra-indication to nephrectomy. This it certainly is not. If there is no great difference between the functional capacity of the two kidneys, there is quite obviously no reason to remove either one of them. But if one is gravely affected, the other only slightly involved, the gravely affected one should be removed. Half the cases of bilateral renal tuberculosis with grave unilateral involvement will not only survive, but will be greatly improved by operation."

Mortality: Cabot and Crabtree's⁴ series of 103 cases (1915) showed an immediate mortality of 3.8% and 60% cured after two years.

Isreal⁶ collected 1023 cases of nephrectomy for renal tuberculosis with a mortality of 12.9% in the first six months after operation and as many more later.

Eisendrath,⁷ from a study of 1500 nephrectomies, concludes that in unilateral renal tuberculosis, the operative mortality in the early months of the disease is only a little over 2% and that the remote mortality is not much higher.

Braasch⁵ reported 203 nephrectomies for tuberculosis at the Mayo clinic (1912) with an immediate mortality of 2.9%. In summarizing results, he concludes that the operative mortality is a negligible factor and that a permanent

5. Braasch, W. F.; Jour. A. M. A. 1912, LVIII, 397.

6. Isreal, J.; Folia Urologica, Sept., 1911.

7. Eisendrath, D. N.; Interstate Med. Jour. 1913, XX, 299.

8. Keyes, E. L. Jr.; Urology, 1919.

cure can be expected in 75% of patients operated upon.

In early cases, before the ureter and bladder are markedly involved, improvement after nephrectomy is rapid. The majority of cases, however, seek relief only after severe bladder symptoms have developed and in these, improvement is usually slow and the persistence of symptoms after operation is generally in proportion to their duration before operation.

CONCLUSIONS

1. In unilateral renal tuberculosis, early nephrectomy is indicated and affords the only assurance of cure.

2. When both kidneys are infected, nephrectomy is contra-indicated, unless one is practically destroyed and the other still has good functional capacity.

3. Urinary symptoms usually persist after operation in proportion to their duration before operation.

4. Under tuberculin treatment, proper dietetic, climatic and hygienic management, many cases will be improved, but are likely to have recurrences later on. Supposed cures are generally an expression of the phenomenon of excluded kidney.

5. 75% of cases of unilateral renal tuberculosis will be cured by nephrectomy.

DISCUSSION

DR. CHARLES G. BEALL (Fort Wayne): I believe if the kidney substance were removed from these beautiful slides of renal tuberculosis we have seen here that very few, if any, pathologists could tell us if these tubercles were developing in the kidney. The point I want to make is that tuberculosis of the kidney has the same pathological development and the same retrogressive processes as in any other part of the body. While we have no positive evidence that tuberculosis of the kidney does heal, yet reasoning by analogy, as Doctor Wynn has brought out, we are certainly inclined to think it can heal. We do know that the tubercle can heal in the lung and leave nothing but a scar; it can heal in the peritoneum and leave absolutely nothing, so we believe it is possible and probably many times does heal in the kidney without leaving any trace of it.

I think a splendid argument in favor of this view is the fact that 20% of individuals who die of other than renal tuberculosis show renal involvement, but certainly nothing like 20% of individuals in the tuberculosis sanatoria have clinical renal involvement. I do not know the exact percentage, but I should think not over one or two per cent. Do not think I am arguing that nephrectomy should not be done in tuber-

culosis. I am mentioning facts that will bear thinking about. The chances are that in most cases where diagnosis is possible the tuberculous process is far advanced.

As to the ideal treatment, there is no question that when the tuberculous process is advanced and unilateral, the kidney should be removed. I would not agree with the statement that it is the only procedure which will give that individual a chance for cure. We know that cures are obtained otherwise. This certainly would give the individual the best chance to get rid of his tuberculosis.

In regard to the use of tuberculin, I want to re-emphasize what Doctor Wynn has said. Let me tell you a little story. One hundred individuals in an institution who were under perfect control were given regular subcutaneous tuberculin tests. Twenty-five per cent. of these individuals—mostly young adults and children—reacted positively. In other words, we had 25 positive tuberculin tests out of these one hundred people. Three years later those individuals who had had this test were carefully gone over, and of the one hundred but two had developed clinical tuberculosis, or active tuberculosis. So we must not assume that the individual who reacts to tuberculin has clinical tuberculosis. On the other hand, the point that Doctor Wynn emphasized particularly is the fact that if we get a focal reaction that is of the utmost importance.

I think the urologist now occupies the same position with relation to the internist as does the ophthalmologist. They have opened an entirely new view of the human body, that of the genito-urinary tract. It is one of the most wonderful developments of the past twenty years.

I used to be afraid of these procedures. It looked like a serious undertaking to do a cystoscopy and make a pyelogram of the kidney. I have been disillusioned. It is comparatively simple. I do not mean it does not require great skill, for it does, but in the hands of a skillful man I would not hesitate. But we must assume the attitude that we must get these cases early when they are curable.

When the tuberculous kidney is removed you have just started to cure the individual; you have not cured him. That individual needs six months, a year or even two years further treatment before he is well.

DR. CHARLES C. TERRY (South Bend): Unfortunately, the x-ray does not always show the extent of tubercular invasion of the kidney. In pulmonary tuberculosis there are usually symptoms and signs that on physical examinations give us some clue as to the extent of the

pathology, but that has not been true in tuberculous disease of the kidney. As was stated by one essayist, the urinary findings in tuberculous lesions of the kidney oftentimes mislead us very much. The kidney may be involved to a considerable extent, and the invasion travel down the ureter until drainage is interfered with, and our urinary findings will not lead us to believe that there is extensive invasion or destruction of the kidney. I certainly hope the x-ray men will in time give us something that will furnish some clue as to the extent of the trouble.

We all know that in a case of low grade tuberculosis of the kidney the patient may be in surprisingly good condition; much better than we have reason to suspect after exploration of the kidney shows it to be in an extensive degree of degeneration.

Personally, I have not much faith in medical treatment of tuberculosis of the kidney, but I do believe that the sooner it is dealt with in a surgical way the better. When we operate these cases, early nephrectomy is not such a difficult operation, and even in cases of pulmonary tuberculosis may be operated with a fair degree of success. But of course ordinarily that is not to be recommended.

As regards cystoscopy, the previous discussant stated that it is a simple procedure. It is a simple thing for the man who is doing it every day and several times a day. It is easy enough to look at these plates and think you can make a differential diagnosis with the cystoscope, but if you do not do a considerable amount of cystoscopy, enough to train your eye, you will find that your findings are confusing, and unless you have a man who is competent with the cystoscope I think it is a good deal like a pathologist who is incompetent—leads you into wrong paths a good many times in your surgery.

The technique of cystoscopy is delicate and requires a great deal of skill. The man who takes considerable time to do his work will have a certain amount of traumatism of the ureter and that is detrimental to the patient.

I believe in early operation in tuberculosis of the kidney the same as in other conditions where surgery is indicated. I believe also we should follow the same procedure as in conditions in the abdomen, and where there is doubt as to the diagnosis I can see no objection to exploring that kidney, because we cannot by palpation or other methods determine the extent of pathological changes. I prefer to do an exploratory operation.

DR. H. K. BONN (Indianapolis): Doctor Hamer has told us that 50% of bilateral renal tuberculosis cases are operable in that you can take out the kidney which is most diseased and

there will remain enough good renal tissue in the other kidney to sustain function. I desire to direct your attention to a new palliative surgical procedure suggested by Rosenkranz for cases of bilateral inoperable renal tuberculosis.

This procedure consists of making a subcutaneous bilateral ureterostomy, that is, the ureter is implanted subcutaneously. Rosenkranz has made this operation in twelve or fourteen cases of inoperable bilateral renal tuberculosis, or inoperable vesical carcinoma.

An extraperitoneal dissection of the ureter is done, the ureter picked up, the bladder end of the ureter ligated and the renal end conducted through the abdominal and implanted subcutaneously. The site of implantation should be below the level of the umbilicus. The operation may be done in two stages, if desired, one ureter being implanted at each stage. Rosenkranz passes a No. 6 or No. 8 French scale, soft rubber catheter into the pelvis of the kidney, through the ureter. This catheter drains into a receptacle fastened to the patient's body by some device. Thus the tuberculous urine, pus and blood does not touch the skin, the patient is comfortable and free from pain and without bladder tensesmus and distress.

Rosenkranz acknowledges that this surgical procedure has a limited field of usefulness, being applicable only in those cases of inoperable bilateral renal tuberculosis or allied conditions. Yet, for the specific indications mentioned, the operation affords a definite palliative result.

DR. P. E. McCOWN (Indianapolis): I want to ask Doctor Mertz and Doctor Moon how many smegma bacilli they have seen. I do not believe I have ever seen a smegma bacillus that I knew was one that somebody had not already growing in the laboratory. The reason I speak of this is the fact that I believe they are very rarely found in the urine. There has always been a discussion about the careful differentiation of the smegma bacillus from the tubercle bacillus. I believe it is a good rule to follow in any urinary condition that is suspected of being tuberculosis that if we find acid fast bacilli in the urine we had better regard it as tuberculosis, because I have tried on a number of occasions to locate the smegma bacillus by examination, but have not been able to find it yet. I believe we can, for the purpose of getting early diagnosis of this condition, practically disregard the smegma bacillus. At least we can if we have a specimen of catheterized bladder urine.

Dr. Wynn stated that with an acid condition of the urine you could feel pretty sure you had tuberculosis. There is one other organism found in acid urine, and that is the colon bacillus. It is not difficult to differentiate this, however,

by the staining method. As to finding the tubercle bacilli in the urine, there is one thing I want to emphasize and that is if we have a urine in which we do not find any bacteria, if it is acid we had better make another stain. We had better, as Dr. Hamer said, make repeated stains day after day for three or four weeks. Many times you will find the tubercle bacilli in the tenth or fifteenth stain. There are certain days when the tubercle bacilli will come away, and not on other days. Tubercle bacilli are more readily found in the pelvic form of renal tuberculosis; in the cortical type, they may not get into the urine and the diagnosis is more difficult.

Doctor Beall made the statement that renal tuberculosis occurred in a small percentage of sanitarium cases. Shapiro three or four years ago found urinary symptoms in 10% of the cases of general tuberculosis. So I really believe it is more prevalent than the average individual thinks it to be.

In regard to the administration of tuberculin. In the younger patients with tuberculosis of the kidney the staff of the Massachusetts General hospital advises giving a series of tuberculin injections before nephrectomy. In other words, they believe that the young patient has not gained an immunity to his tuberculosis, and expect the second injections to build up sufficient immunity so that the shock of nephrectomy will not cause a generalized miliary tuberculosis which is possible to follow in such instances. It is advisable to use tuberculin, as Doctor Beall said, for some time after the removal of the kidney. As he well said, removal of the kidney is the beginning of the cure of renal tuberculosis, but by removing the massive portion of the infection Nature is given an opportunity to overcome the remaining focus.

I would like to speak of the question of anaesthesia in this operation. These patients should not be given ether. It is best to use novocaine locally, and nitrous oxide-oxygen for general administration. I think ether has a tendency to stir up lung tuberculosis and it is quite true that a majority of these cases are secondary infections from the lungs or some other part of the body.

DR. BERNHARD ERDMAN (Indianapolis): I feel very sure that the statement which was made by one of the discussants that the diagnosis of renal tuberculosis with the cystoscope is a simple matter will be disagreed with by many. It is not a simple matter at all. As a rule we have two types of individuals coming to see us. One is the individual who has had haematuria. It seems to be pretty clearly settled that the individual with blood in his urine has an immediate and unfailing desire to visit his

doctor, because he knows that blood in the urine is not normal. Such an individual, particularly a young man or young woman, in whom you can demonstrate absolutely the absence of stones and stricture, should have the most careful and constant supervision over a considerable period of time, and it necessitates mechanical as well as physical methods for making a diagnosis. The other type is the individual who for a long time has had burning, foul urine, in which we suspect bladder tumor, foreign bodies in the bladder, or something of that sort; but I do not believe this patient offers the difficulty in differential diagnosis that the younger individual does.

Recently I had occasion to consult with some men with whom I have become acquainted in the West and who I know have a good deal to do with renal tuberculosis, and a measure was suggested to me which has given most surprising results. That is, one hour before making your cystoscopic examination insert into the bowel a suppository of one grain of opium and one-eighth grain of extract of belladonna. Then after thirty minutes instill into the bladder one ounce of a solution containing thirty grains of antipyrin. This has been used by the French for some time. It is surprising with what comfort a number of these individuals can be cystoscoped if one has judgment when to do this.

The tuberculous focus in the kidney which has not invaded the pelvis offers a field for a vast amount of work and sometimes makes it absolutely impossible to establish your diagnosis. It is not at all an easy thing to settle the question of renal tuberculosis, and after you have settled whether it is unilateral or bilateral you must, if unilateral, work out the function of the opposite kidney and then decide what will be the best opportunity for your patient.

DR. A. C. KIMBERLIN (Indianapolis): The prevailing tendency is to regard renal tuberculosis as a primary disease, which is certainly quite the exception. Next is the responsibility of the man engaged in the practice of general medicine—the family physician—if there be such a thing any more—to not overlook the fact that much depends on his ability to do good diagnostic work before his patient passes into the hands of those who specialize, as most of the men do who have presented this subject. Too, such a presentation as this should not in any manner discourage one doing general practice.

While such diagnostic methods and studies as have been presented are not always possible for the family doctor there are many signs and symptoms sufficiently diagnostic of renal tuberculosis to almost justify calling them the kidney cough, as they bear the same relation to renal

tuberculosis as ordinary cough does to the pulmonary type.

All know that pulmonary tuberculosis in the adult is practically never a primary disease—always a recurrent infection from an early glandular invasion, which dates its beginning in childhood if not in infancy.

While a physical examination may enable an ordinary physician to make a finished diagnosis of pulmonary and renal tuberculosis, he should always keep in mind the importance and value of a carefully taken clinical history, which investigation should extend back to the childhood of the individual. One must antedate the history of the present illness in their patient for like psychoneurotics the family history and that of early childhood is oftentimes the most valuable evidence on which to base one's diagnosis.

To be sure we all greatly appreciate this morning's presentation as it is characteristic of modern medicine to speak in figures rather than in generalities. We no longer speak of cardiac hypertrophy, only for what it suggests to the mind. We not only think of high blood pressure now in connection with cardiac hypertrophy but investigate the presclerotic stage, the stage of hypertension, and the secondaries, or stage of complications. All this has been made possible by the use and teachings of the blood pressure apparatus.

The point to emphasize in making a correct diagnosis of renal tuberculosis is that the general practitioner should realize that the early clinical history is of most importance.

As to treatment: While there is no medical treatment except for complications, climate and hygienic treatment at times certainly yields most satisfactory results. Tuberculin intelligently though cautiously used in tuberculosis of the genito-urinary tract has an established value, but one should not overlook the danger incident to its use as once so strongly emphasized before this society by the late Dr. Potter.

DR. R. C. BEELER (Indianapolis): In my paper I failed to speak of one important thing and that is that if you have your x-ray at hand it is a mighty good thing to study your chest as well as the gastrointestinal tract, because in some of these cases the kidney will not show and you can sometimes locate a focus that will be pretty positive for tuberculosis and thus help you in your diagnosis.

The preparation that I spoke of is the most important thing of all. We have cases where we get no results from examination because of lack of preparation. Doctors send them in after having a meal of pancakes or something of that sort, they had had no preparation, probably the bowels moved two days ago, and expect the

roentgenologist to show a kidney shadow, or expect him to demonstrate some little calcareous spot on his plates, which is impossible for him to do.

The technique is important, first in taking the films, and then not being afraid to use them. It is an expensive procedure, of course, but still the taking of eight or ten films if necessary will sometimes reveal a shadow that in the first three or four did not appear. Interpretation is of the utmost importance, but it takes a good deal of experience to read these shadows and to differentiate the shadow of the normal kidney from that of the diseased one. That question comes to the man who is doing x-ray work in large quantities, and the thing we must have is the close co-operation of the internist and of all the other men who are working for this diagnosis. We must get together and talk these things over. In fact, the x-ray laboratory should be the meeting place where all these men can get together and arrive at some positive conclusions.

DR. H. G. HAMER (Indianapolis): Doctor Bonn has called out attention to double ureterostomy for drainage in cases of bilateral renal tuberculosis. I have no doubt this procedure is of value in the handling of some of these cases. I am reminded of the practice for which Doctor Wishard has stood almost alone for many years, i. e., that of drainage of the tuberculous bladder by cystostomy. It is gratifying to see the way these patients improve after drainage has been instituted.

PROPHYLAXIS OF SYPHILIS WITH ARSPHENAMIN

LEO L. MICHEL and HERMAN H. GOODMAN, New York (*Journal A. M. A.*, Dec. 25, 1920), call attention to a method of preventing syphilis which they have found efficacious and which has not previously been described in the American literature. The injections of arsphenamin in small doses in persons who present no lesions, and who are definitely known to have been exposed to syphilitic infection, have in all cases resulted successfully in acting as a prophylactic measure. The prophylactic doses have averaged 0.3 gm. of arsphenamin, and the number and interval of the injections have varied with the time since first exposure. In no case has this been less than three doses. The time since exposure has little bearing on the result, but must be taken into consideration when the minutiae of the procedure are under consideration. In two reported cases, a single injection has been held to be ample.

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EDITORIALS

ENCEPHALITIS

It is unfortunate that the epidemic incidence of any disease should lead to the inevitable publicity of the lay press. Such publicity results in the dissemination of inaccurate information, and not infrequently stampedes the laity into an unnecessary panic. The influenza epidemics of 1918 and 1919 afford excellent illustrations of this—and more recently the epidemic of encephalitis, though to a less marked degree.

The name by which the disease is popularly known is itself unfortunate in that "sleeping sickness" has long been the designation given trypanosomiasis, the African disease produced by the bite of the tse-tse fly. The latter is invariably fatal and its confusion in the lay mind with encephalitis (with a mortality of 20 per cent) has naturally led to an unnatural dread of this disease.

Epidemic encephalitis (encephalitis lethargica) is not a new disease, but its markedly increased incidence in the past two years has aroused new interest in its study. It is known to be infectious, though the etiological factor is probably not always the same. It commonly is preceded by infections of the nose or throat, and probably is transmitted, though not readily, by nasal and oral secretions.

The onset is usually gradual, rarely abrupt, and is marked by increasing headache and somnolence, diplopia which is sometimes intermittent, and moderate increase in temperature.

The headache is ordinarily of moderate severity and has no characteristic localization. The somnolence is of varying degree and may reach the stage of coma. As a rule, however, the patient can be aroused sufficiently to answer questions. Marked double ptosis, contracted pupils with normal reactions, and mild strabismus are usually present. The eye grounds show no abnormality. The tongue is heavily coated and fissured. Speech is monotonous and blurred, apparently due to uncertain muscular control. Tremors, twitching of the muscles and athetoid movements may be present. Other neurological signs are ordinarily lacking, but when signs of meningeal irritation are present they are of bad omen. During the early stages there

is commonly marked constipation and some retention of urine—later the evacuations may be involuntary.

The sensorium is clouded and the patient sleeps quietly as a rule. Restlessness and muttering delirium may be present during the early febrile stages. In the fulminant cases acute mania with extreme psychomotor activity have been reported.

The fever ranges from but little above normal to 104 degrees and falls in from four to seven days in the average case. The blood shows a moderate leucocytosis, with normal or increased polynuclears. The spinal fluid may be under some increased pressure and show a slightly increased cell count (lymphocytic). It is often entirely negative.

The diagnosis generally is made without difficulty—the combination of lethargy or somnolence, double ptosis, headache and diplopia being but rarely presented by any other condition. Tubercular meningitis, syphilitic meningoencephalitis, and botulism should however be borne in mind in making a differential diagnosis.

The prognosis is *not* particularly grave. It is said that 80 per cent of the cases recover, and in this epidemic at least, this figure is probably too low rather than too high. Recovery is slow, particularly as regards the drowsiness, twitching and muscular weakness, but is usually complete. The average duration of the disease is from two to ten weeks.

Treatment consists solely of nursing and hygiene. No medicinal therapy has been suggested that is of any value.

PROFESSIONAL INCOME

To the professional man the problem of correctly making out an income tax return for the year 1920 is somewhat more involved than that presented to the salaried man. The wage earner on a fixed salary has an accurate estimate of the amount of compensation received for personal services, while the professional man's income varies from year to year. In the professional class may be included the physician, dentist, lawyer, architect, veterinarian, author and clergyman. Each must figure up his net income for the last year. If single or if married and not living with his wife and his net income was \$1,000 or more, or if married and living with his wife and his net income was \$2,000 or more, a return must be filed.

The exemptions are the same as for the year 1919, \$1,000 for single persons and \$2,000 for married persons living with husband or wife, and heads of families, plus \$200 for each person dependent upon the taxpayer if such persons are

under 18 years of age, or incapable of self-support because mentally or physically defective. The period for filing returns is from January 1 to March 15, 1921.

The professional man must make a return of all fees, salaries and other compensation for services rendered, together with income from all other sources. If he keeps his accounts on the "receipts and disbursements" basis—which means a record of the amount received and the amount paid for expenses—he should file his income tax return for the year 1920 on that basis. If he keeps books showing income accrued and expenses incurred during the year, he must make his return from his books and include all income, even though not entered on his books. If books are kept on the accrual basis the taxpayer must include all income that accrued, even though not actually received, and may deduct items of expense, although not actually paid. Both the receipts and disbursement basis and the accrual basis are explained in instructions on the forms for filing individual returns of income.

This constitutes gross income from which the taxpayer is allowed certain deductions in arriving at net income upon which the tax is assessed. Among such deductions are the cost of supplies used by him in the practice of his profession, expenses paid in the operation and repair of an automobile used exclusively in making professional calls, dues to professional societies and subscriptions to professional journals, rent paid for office room, expense of fuel, light, water, telephone used in his office, and the hire of office assistants. Amounts expended for books, furniture and professional instruments and equipment of a permanent character are not allowable deductions. In the case of a professional man who maintains an office, but incidentally receives at his home patients, clients or other callers in connection with his professional work, no part of the rent of the home is deductible. If, however, he uses part of the house for his office, such portion of the rent as is properly attributable to such office is a deductible item.

A reasonable allowance is made for depreciation, or wear and tear of equipment and instruments used by professional men. When through some new invention or radical change in methods or similar circumstances, the usefulness in his profession of some or all of his instruments or other equipment is suddenly terminated, so that he discards such asset permanently from use, he may claim as a loss for that year the difference between the cost (reduced by reasonable adjustment for wear and tear it has undergone) and its junk or salvage value. If the apparatus was owned prior to March 1, 1913—the date the first income tax law became

effective—its fair market value at that date should be considered instead of its cost in figuring depreciation and obsolescence.

Deductions for uncollectible fees form an important item in the returns of many professional men. To be allowed as a deduction, a debt must be worthless and must have been charged off within the year in which its worthlessness was discovered. The return must show evidence of the manner in which discovery was made. For example, statement should be made that the debtor has been discharged from bankruptcy or has disappeared leaving no trace, or that all ordinary means of collections have been exhausted.

A debt proved to be worthless is not always a proper deduction. Unpaid amounts representing fees for professional services are not allowed as deductions unless included as income in the return for the year in which the deduction is sought or in a previous year. The fact that expected income was not received does not reduce the taxable income. If a debt is forgiven it cannot be deducted, because it is then regarded as a gift. A debt may not be charged off or deducted in part, but must be wholly worthless before any part can be deducted.

Compensation in any form for professional services must be included as income. If a physician, lawyer, or other professional man should receive from a merchant goods in payment for professional services, the fair market value of such goods must be included as net income.

Forms for filing returns are now available at offices of collectors of internal revenue and branch offices. Collectors will mail to each person who last year filed a return a copy of the return form for 1920. Failure to receive a form, however, does not relieve a taxpayer of his obligation to file a return and pay the tax on time. Taxpayers whose net income for the year 1920 was \$5,000 or less should use Form 1040A. Those whose net income was in excess of \$5,000 should use Form 1040.

In addition to the individual forms, partnerships must file a return of income, or even if there was no net income, on Form 1065. Partnerships as such are not subject to the income tax. Individuals carrying on business in partnership, however, are taxable upon their distributive shares of the net income of such partnerships whether distributed or not and are required to include such shares in their individual returns. The return must show the name and address of each partner and his share of net income.

The tax this year as last may be paid in full at the time of filing the return—on or before March 15, 1921—or in four equal installments, due on or before March 15, June 15, September 15, and December 15. Payment may be made by

cash, money order or check, which should be made payable to "Collector of Internal Revenue". The return must be filed with the collector for the district in which the taxpayer lives or has his principal place of business. Heavy penalties are provided by the revenue act for failure to file a return and pay the tax within the time prescribed by law.

VALID OBJECTIONS TO THE CREATION OF A CHIROPRACTIC BOARD

In connection with the efforts now being put forth to secure a special licensing board for the chiropractors, the secretary to the Indiana State Board of Registration and Examination has sent to each member of the Indiana legislature a letter containing some very valid objections to the plan proposed by the chiropractors. In this letter the enactment of a law creating a new board composed exclusively of chiropractors, for the purpose of examining and licensing doctors who practice the healing art according to the chiropractic method, is considered unwarranted and unnecessary for the following reasons:

"First: because chiropractor doctors and all others who comply with the pre-medical and the medical educational requirements of the present law are now entitled to license,—see reports of 1919-1920 of State Board of Medical Registration and Examination. Uniformity in educational requirements is the essence of the law and a special board for the chiropractors would constitute class legislation.

"Second: The enactment of such a law will not only create another and unnecessary board, but will establish a precedent which will result in other healing sects, of which there are many, also demanding special concessions and boards of *their particular faith and kind*. I herewith quote that provision of the act which defines what shall constitute the practice of medicine within the meaning of the law: 'To open an office for such a purpose or to announce to the public in any way, a readiness to practice medicine in any county of the state, or to prescribe for, or to give surgical assistance to, or to heal, cure or relieve, or to attempt to heal, cure or relieve those suffering from injury or deformity, or disease of mind or body, or to advertise or to announce to the public in any manner a readiness or ability to heal, cure or relieve those who may be suffering from injury or deformity or disease of mind or body, shall be to engage in the practice of medicine within the meaning of the law.'

"The courts of this and other States have held that it is the *thing done*, and *not the name*, that constitutes the practice of medicine within the meaning of the law. Therefore what the chiro-

practor doctor does in conducting *his* business is the practice of medicine as defined by law. Hence the chiropractor doctors are admitted to licensure on the same terms and conditions as are other physicians except they are not required to take an examination in materia medica. The enactment of a law which confers an exclusive and special privilege for any single branch of the healing art on lower educational standards than is now provided for all schools of practice, is rank class legislation, discriminative and without justification."

MISGUIDED ZEAL FOR PUBLIC WELFARE

The American people are forced to be on guard constantly to prevent being duped by pseudo-reformers and social uplifters of various kinds who without any very logical reasons for their attitude are attacking the public treasury, the public morals, and even the personal rights of individuals. As a matter of fact we are being surfeited with propaganda concerning social reforms, many of which are sponsored by a lot of half-baked enthusiasts who are desirous of securing publicity for themselves, or of necessity must get rid of a little superfluous energy which nine times out of ten might be expended to better advantage in another direction. One of the latest paternalistic schemes up for consideration is that relating to the state control of maternity which is only another aid in the establishment of state medicine. Maternity benefits are unnecessary in the light of what is being done by medical educators, boards of health, child welfare societies, and many other organizations, together with the cooperation of physicians, in efforts to protect the life and health of the expectant mother and her offspring. Maternity benefits will not prove a panacea unless we get at the cause of our mortality and morbidity record in childbirth. In reality the mortality rate in childbirth in a large measure is due to our moral and social conditions. Bad habits, wrong living, and heredity have brought about physical defects which are giving many of the fatal results to childbirth. Immorality opens the gates to all kinds of imperfections in social conditions. When morality is lacking there is nothing to check the tendencies to follow fashion regardless of the effect on health. The tendency toward pleasure madness turns night into day, depriving future mothers of the fresh air, rest, and sleep which they so much need. The general health and powers of resistance are lowered and expectant mothers who have burned the candle at both ends are utterly unfit to bear children. State maternity benefits will not prevent deaths of expectant

mothers who have been made unfit by immorality, social excesses, or heredity. The members of the medical profession are opposed to socialized medicine, and should oppose this new form of compulsory insurance which is allied to those that have been offered for health, old age, sickness, etc.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

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How many doctors have written or telegraphed their senators and representatives concerning the necessity of defeating the chiropractic bill in the interest of the protection of the public from incompetents? Don't all speak at once!

EVERY reputable doctor in Indiana ought to support House Bill No. 267, by Kingsbury, which adds to the effectiveness of our Medical Practice Act and enables us to punish violators. Doctors who are asking that both the public and the medical profession be protected should get busy and see that the Kingsbury Bill has the proper support.

THE Lion Optical Company of Cincinnati is soliciting business from Indiana physicians. For the benefit of the members of the Indiana State Medical Association we desire to say that this company sells and recommends a number of proprietary eye remedies, the virtues of which depend largely upon printer's ink. A reputable optical concern soliciting business from reputable physicians will steer clear of trade in remedies that have any semblance of being humbugs.

THE bill before the present Indiana legislature providing for a physicians' registration fee is worthy of support. An annual registration fee will enable the Board of Medical Registration and Examination to keep track of the doctors who are practicing in Indiana and know

what they are doing, and it also will furnish much needed funds for the prosecution of offenders. There should be no opposition to this bill on the part of the members of the medical profession.

AGAIN it is time to pay income tax, and doctors are no better than anyone else when Uncle Sam makes his demands. It would be well for doctors, who generally are noted as being procrastinators, to know that a heavy penalty is attached for non-payment of income tax on or before March 15. It also would be well for every doctor to know that the income tax applies to profit received from any source, whether in the form of gifts, salaries, or returns from services of any kind.

IN several counties of the State the doctors, while technically members of a county medical society, are not holding meetings, and in one or two counties have not even gone through the formality of selecting representatives to handle their dues and perform duties that make them eligible for membership in the State Association. There is room for some active work on the part of councilors or others who can stir up a little enthusiasm and get the apathetic doctors working in a medical society that exists in something more than a name.

It would be a fine commentary on the fairness of doctors if we sanctioned the bill before the legislature which creates a Board of Examination and Registration for Nurses to be composed of three doctors and two nurses. How would we like to have nurses on the Medical Board for the purpose of passing judgment on our fitness to practice medicine? In reality there was no occasion for the introduction of any such bill in the present legislature, and we hope that the movement to upset the present law governing the registration of nurses will be side-tracked.

THE Indiana legislature is in session and as we go to press the chiropractic bill is up for action in the House. As usual only a few members of the Indiana State Medical Association are taking enough interest in medical legislation, and the protection of the public from medical imposters, to use their influence among legislators to prevent the legalizing of the chiropractic sect. There are hundreds of doctors who howl when unfavorable medical legislation is passed, but those who howl the loudest are the very ones who do the least toward promoting wise and beneficent laws.

WE are heartily ashamed of those Indiana doctors who are opposed to paying the insignificant sum of two dollars as an annual registration fee in order that the Board of Medical Registration and Examination may have a dependable record of those holding licenses and keep track of physicians as they change from place to place. The small sum asked annually for registration will make a fund sufficient to enable the Board to enforce the Medical Practice Act. Fortunately there are only a few physicians who are opposed to the measure, and in all probability those physicians are the ones who complain the most because our medical practice law is not enforced or because we have no better means of keeping track of quacks and itinerant doctors.

AGAIN the Indiana legislature is called upon to pass judgment upon a bill which would give the druggists a monopoly on drugs and actually prohibit doctors from dispensing drugs in any form. It is needless to say that Indiana's sick, especially in country districts, would pay the penalty if doctors were prohibited from dispensing drugs and the sick were compelled to wait upon the pleasure of some pharmacist—perhaps miles distant—before receiving the medicine prescribed by the doctor to relieve suffering or combat the ravages of disease. We do not believe that the better class of druggists are in favor of any such vicious legislation, and certainly the manufacturers, who profit through the patronage of doctors, ought to help in the defeat of the bill.

"LET George do it" is the attitude of the majority of Indiana doctors who are now silent and indifferent concerning the chiropractic bill now before the legislature, and it remains for our invaluable chairman of the Legislative Committee of the Indiana State Medical Association, Dr. W. N. Wishard, of Indianapolis, and two or three other enterprising medical men who have the interest of the profession and public at heart, to take the responsibility of fighting the chiropractic bill among legislators who really have to be shown the iniquity of the chiropractic bill in order to vote intelligently. Of course we expect a few men to do all the work, but we really feel that more might show a little interest by either writing or wiring their sentiments to senators and representatives.

THE United States Public Health Service is warning consumptives to stay away from the semi-arid west where the hospitals are filled to overflowing, where even ordinary housing accommodations are largely unobtainable, and

where proper care is impossible. As a matter of fact, it is time for physicians as well as the public to know that climate in itself does not form a necessary part in the successful treatment of tuberculosis. There are any number of sanatoria and tuberculosis camps under both private and public control, located in various sections of the central states and not a few right here in Indiana, which afford the consumptive not only appropriate treatment and care but as good a chance of recovery as may be found in any of the western resorts for the tuberculous.

INDIANA physicians recently have been flooded with letters and literature from the "T. J. Glover Research Laboratory, Toronto, Canada," heralding "Glover's Cancer Serum," and advising that this serum is now obtainable at the address given, price five dollars per treatment, with directions for treatment with each order. Upon inquiry it is learned that these "treatments" are still in the experimental stage, and the reported results have not been corroborated by independent investigators. The Academy of Medicine of Toronto has appointed a committee to investigate the claims made for this "cancer serum", but as yet no report has been made by them. Physicians are cautioned to pay no attention to this "remedy" until its claims are proven, and especially in view of the fact that the literature conveys the impression that the Glover Research Laboratory had received a permit from the United States Public Health Service licensing the interstate sale of this serum in the United States, whereas no such license has been issued.

WE hear much about avoiding union methods in the conduct of our profession, but we note that strikes among the doctors of several countries of Europe are getting rather frequent. These strikes are largely brought about through the effect of state medicine or various benefit associations that have been successful in fixing a very low standard of fees for medical and surgical services. Recently 4,000 doctors of Vienna, who have been treating patients under the auspices of sick benefit associations, have gone on a strike and are refusing to make visits upon the sick except at the regular fees obtained in private practice. In England there have been strikes among members of the medical profession who have objected to the low scale of fees fixed by state enactment or industrial regulation. In fact regulation of fees in some of the foreign countries has reached that point where the average medical man comes very close to starving

if he depends upon such fees. What is occurring in Europe is bound to occur in this country unless we get away from the idea of not considering the practice of medicine a vocation and all who engage in it willing to devote time and talents without hope of adequate reward. If we are going to get into this regulation business we should regulate every vocation and not apply it to the members of the medical profession alone.

EVERY prominent medical society, especially if it has a regular place of meeting, possesses a stereopticon and epidiascope as a part of its equipment for illustrating papers and elucidating medical lectures. To this equipment must now be added a moving picture machine, and the Federal Government, through the Surgeon General's office and the Public Health Service, will furnish a large number of motion picture films which have been prepared for instruction purposes. The latest film from the United States Public Health Service vividly presents the life history of the mosquito, especially the kind that transmits malaria germs. The views show how the female mosquito absorbs the malaria germs with the blood of the malaria patient, how the germs increase and multiply, and pervade the salivary glands of the mosquito, and how the mosquito passes them on to the next innocent bystander, who promptly falls ill with the disease.

WE note that some of the county medical societies are suspending members for non-attendance at meetings and unethical advertising. We quite agree with what one of the secretaries says, that "if the medical profession is to retain the respect of the public it must keep itself respectably clean." It is all right to talk about 100 percent membership, but isn't it better to have as members of a county medical society only doctors who are a credit to the society and bar those who are a source of humiliation and perhaps disgrace? It is a comparatively easy thing to secure members. As a general thing the more objectionable doctors are the very ones who like to be in good company, but why admit such men in the first place? We heartily commend the action of some societies that have had the nerve to suspend from membership those doctors who are not only guilty of non-attendance at meetings—which in itself shows lack of interest—but also are guilty of unprofessional conduct.

THE work of the Medical Defense Committee has been reorganized, owing to the resignation of Mr. F. E. Schortemeier, attorney. From now

on all communications concerning Medical Defense will be sent to Dr. Charles N. Combs, Secretary, Terre Haute, Indiana. The Committee has secured the services of our former attorney, Mr. A. G. Cavins, of Indianapolis, who will be the general counsel. In case of a malpractice suit, the member will be allowed to choose his own local attorney, who will actively manage the defense of the case. Mr. Cavins will act in an advisory capacity, and will prepare the brief in case of an appeal. Subject to the approval of the Medical Defense Committee, the Association will pay the local attorney's fees in connection with the defense, or, if the member is already insured in a medical defense insurance company, this Association will pay one-half of the expense. No member will be defended until he has notified Dr. Combs and has properly completed the application blank, which will be furnished by Dr. Combs. This will include a recommendation of the case by the officers of the local medical society.

ACCORDING to the Medical Practice Act each and every one of the chiropractors who are attempting to cure or relieve the sick and suffering of Indiana are subject to prosecution for practicing medicine without a license. Just why chiropractors have escaped punishment for infraction of the laws of Indiana is a little difficult to understand except on the theory that prosecuting attorneys as a result of political or other reasons have found it convenient to avoid prosecutions. However, when the lives of innocent children and the public welfare are seriously jeopardized, as in the instances occurring in Fort Wayne where chiropractors were treating small-pox cases and diphtheria, in both instances the disease not being reported to the health department, and in the case of diphtheria the patient dying while under the chiropractor's care, it would seem that prosecution is necessary in order to determine whether or not the people of Indiana are to be protected and whether or not Indiana laws are effective.

AN anti-vivisection bill has been introduced into the present Indiana legislature, and aside from the usual viciousness of such measures, whenever and wherever introduced, the one that is before the Indiana legislature at the present time contains an unusual "stinger" which would make it possible to prosecute many doctors for ordinary operative work upon their patients. It probably is another case of "giving a calf enough rope and he will hang himself," but aside from all that, the members of the medical profession should see to it that the anti-vivisection bill dies in the committee, or, if it is

reported out, it should be defeated in the interest of scientific progress and the benefit of humanity. It is the height of nonsense to place a higher value upon the lives of a few guinea pigs and rats than upon the lives of human beings, and especially children who perhaps have received the greatest benefit from research work which has developed the most important curative advancements in medicine as a direct result of animal experimentation. Furthermore, the greatest advances in veterinary science, with the resulting protection to live stock, have come about through the results of animal experimentation; so that aside from the humanitarian view of the question there is the economic consideration in the protection of cattle and hogs, which oftentimes outweigh any economic consideration of human beings.

THE State of Colorado for some time has had a law whereby any physician in the state could secure a pass on any railroad in the state by simply asking for same, but when a pass was accepted by a physician he automatically became an employee of the railroad company and could be called upon to render service to any case, whether sickness or injury, connected with the railroad company. Furthermore, being in the employ of the railroad, he could not give testimony against the company in any accident or injury case. Some representative in the present Colorado legislature has awakened to the injustice of such a law and has introduced a bill against such practice. In Indiana doctors do not get passes that easy, but they do manage to get passes on the railroads which generally are considered handsome remuneration for many thousands of dollars worth of service rendered the railroad companies, and there seems to be no end to the doctors in Indiana who fall into that sort of trap. What every doctor ought to appreciate is the fact that his services are worth just as much to a railroad company as they are to an individual, and the charges should be similar. Furthermore, every doctor ought to advise railroad companies that he is able and expects to pay the usual charges for any service he receives from the railroad company, but that he also shall expect the railroad company to pay him his usual fees for any services rendered them.

INCREASING migration to the cities and towns seems to be affecting members of the medical profession the same as those following other vocations, and this is shown by the growing scarcity of doctors in country districts. In fact there are several small towns in good farming districts in Indiana, formerly supporting two to five doctors, that now are without

doctors of any kind whatsoever, and the residents of those districts are sending out S. O. S. calls for doctors. Can it be that all of the young doctors have such a desire to be in touch with the advantages of city life that they are willing to put up with less income rather than live in small towns and villages where they are sure of comforts and a good income! It reminds us of the saying of a struggling doctor in New York City who said that he would rather starve in New York City than live on the fat of the land in any of the small cities of the Middle West. However, everyone to his taste, as the old lady said when she kissed the cow, but we desire to remind some of the young men who are just getting out of medical colleges that they make a great mistake if they overlook some of the rich and populous country districts in selecting a place to practice medicine. One should not feel compelled to stick to the job day and night, year in and year out, and an occasional visit to the cities, and the pleasure afforded by frequent contacts with the outside world, would be quite sufficient to vary what some might consider the monotony of small-town life even though such life prove economically profitable.

IN a recent number of THE JOURNAL we commented on the "slaughter" of tonsils and thyroids, with a suggestion that a little more study of these individual cases might result in a more rational therapy. A correspondent reminds us that we also ought to condemn the "slaughter" of the teeth, for it is perfectly shocking how frequently we find very young people wearing full sets of artificial teeth, both above and below, the natural teeth having been sacrificed on the altar of perhaps misguided judgment on the part of some dentist who has gone to extremes concerning absorption of infection from dental pathology. The frequency with which dentists recommend extraction of all of the teeth in young people seems criminal, and it may be seriously doubted if in a single one of such instances there is any justification for such radical procedures. Nowadays every dentist owns an x-ray outfit, and he glibly talks about infected foci about teeth as depicted by the x-ray plate, when as a matter of fact it may be doubted if he knows how to interpret an x-ray plate, to say nothing of judging whether or not the interpretation points to the necessity for such radical measures as the withdrawal of the offending teeth. We do not doubt the urgent necessity of removing foci of infection in the mouth, whether it be tonsils, or teeth, but we do question the propriety of sacrificing so many teeth as we frequently find to be the case in comparatively

young people who all their lives have been reasonably thorough in their attention to sanitation of the mouth and who have given little evidence of disease in and about the teeth though perhaps suffering from some constitutional disturbance that indicated foci of infection somewhere. It really seems that there is room for very great improvement in the therapy of the average dentist, and it is hoped that very soon the question of extraction of the teeth will be on a more rational basis.

SOME of the venereal clinics under state and federal control are not deserving of the support of the medical profession for the reason that they are not fulfilling the mission for which they were established. The venereal clinics were created for the purpose of giving appropriate treatment to those afflicted with venereal diseases but who have no funds for obtaining the necessary medical attention. However, in many instances this service is being taken advantage of by classes of people who are amply able to pay for the attention given, and they are receiving neosalvarsan injections and other treatment at the venereal clinics free of charge. Such a condition of affairs is unethical and unfair, not only to the medical profession but to the people who are being pauperized and who are wrongfully getting the impression that they should have something for nothing—that the world owes them a living—and thus adding to a sentiment which already has begun to undermine our Government and cause an unrest which is threatening the Nation. There is no question but that the venereal clinics are a good thing if conducted properly, but unless they are placed under social service control and every case presented for treatment investigated and barred from free service if found to be able to pay for the treatment required, they are not fulfilling their mission and are working an injustice to the public as well as to the medical profession. If the clinics are to be continued on the present basis, then doctors should not be asked to support them and to pay taxes for their upkeep. The venereal clinic is only another entering wedge tending to the socializing of medicine and the medical profession will only injure itself by giving support to a venture of such questionable sociological value and so harmful economically for so many of the patients themselves as well as for the medical man.

THE chiropractors seem to be proving up their incompetency and demonstrating the folly of legally recognizing them as worthy of the confidence of the public in the treatment of the sick, as evidenced by some recent episodes in Fort Wayne where chiropractors not only failed

to recognize smallpox but were found guilty of aiding in the spread of the contagion; and still later, when other chiropractors were found guilty of not only treating diphtheria without recognizing the disease and reporting it to the health authorities, but being charged with being indirectly responsible for the death of the patient as well as the spread of the contagion. In the case of the death from diphtheria, the attending chiropractor admitted being employed during the day by the General Electric Works and is a chiropractor on the side, and did not hesitate to assume charge of a case of diphtheria, which disease of course was not recognized by him and the seriousness of which was not recognized until after the death of the child.

The smallpox and diphtheria episodes to which we have referred are the strongest possible arguments that can be offered in opposition to the effort on the part of chiropractors to secure legal recognition for the treatment of the sick and suffering in Indiana. The chiropractors as a class are ignorant pretenders who, without either general or special education, and with no training or experience in the recognition of diseased conditions, are asking for the privilege of practicing medicine. It is the height of absurdity to consider these men as worthy of recognition, and the protection of the public demands that they be prevented from imposing upon the people. They should be told and told very emphatically that if they want to practice medicine in Indiana they must comply with the present standards, which are none too exacting.

HOUSE BILL No. 20, introduced by Representative Kamman, proposes the creation of a new Board for the examination and registration of trained nurses, three of the five members of this Board to be physicians. This Bill has not the official approval of the Indiana State Medical Association, as explained in a letter sent out by the Committee on Public Policy and Legislation of the Indiana State Medical Association, and the following objections are given:

(1) There is no occasion for such a bill, as there already is a state Board for the purpose of registering and licensing nurses and the Board properly is composed of nurses.

(2) House Bill No. 20 proposes that three of the five members of the Board provided for in this Bill shall be physicians. This is manifestly for the purpose of turning the control of the Nurses' Board to that of the medical profession, and is wholly undesirable. If the nurses were to ask for a representative on the State Medical Board it would undoubtedly arouse the opposition of every physician in Indiana. Physicians have no right to be on the Nurses' Board.

Not one of them has taken a course in nursing, and very few, if any, could pass an examination in it. It is a separate, although allied, profession requiring separate and special educational training.

(3) The Bill is loosely drawn and poorly phrased.

(4) It lowers the standard of professional nursing. Its educational defects are so apparent that your committee's reading of the Bill will sufficiently disclose them without taking your time to discuss them in detail.

(5) It would abolish the Board composed wholly of nurses.

(6) It would be a serious detriment to all the larger hospitals in Indiana.

(7) There is nothing of merit in the Bill which cannot be obtained through reasonable and proper presentation of the facts to the present Board. This latter fact would have been pointed out to the proponents of the House Bill No. 20 if they had permitted its consideration by the Committee on Public Policy and Legislation of the Indiana State Medical Association.

DEATHS

JOHN F. BRYDON, M.D., Griffin, aged 77, died December 12.

HIRAM P. NEYMAN, M.D., died recently at his home in Saltillo.

CHARLES E. DUNN, M.D., Shelbyville, died December 16, aged 57.

LAWRENCE D. WILSON, M.D., Gary, died December 22, aged 64 years.

MRS. ELIZA DRAKE, aged 80, widow of Dr. T. G. Drake, died recently at Prairieton.

CHARLES V. LEEDY, M.D., Andrews, died December 22, aged 52 years. He was graduated from the Baltimore Medical College in 1896.

WILBUR B. MORRIS, M.D., died recently at his home in Chalmers. He was graduated from the University of Louisville Medical Department in 1898.

HIRAM VARD WHITING, M.D., Mt. Vernon, died recently, aged 45 years. He was graduated from the University of Louisville, Medical Department, in 1898.

WILLIAM N. HORNE, M.D., died December 21 at his home in Anderson at the age of 68 years.

He was graduated from the Medical College of Ohio, Cincinnati, in 1877.

GEORGE P. RAMSEY, M.D., Crawfordsville, died recently at the age of 44 years. He was graduated from the Central College of Physicians and Surgeons in 1900.

DANIEL JEFFERSON BALLARD, M.D., died January 9 at his home in St. Paul, aged 79 years. He was graduated from the Cincinnati College of Medicine and Surgery in 1876.

MRS. CATHERINE RODMAN, widow of the late Dr. William Martin Rodman, formerly of Brownstown and recently of Indianapolis, died recently at her home in Indianapolis.

NOBLE WINFIELD SCOTT, M.D., died recently at his home in Huntington, aged 81 years. He was graduated from the Cincinnati College of Medicine and Surgery in 1866 and was a member of the Huntington County Medical Society and the Indiana State Medical Association.

GEORGE W. BROWN, M.D., died December 16 at his home in Frankfort, aged 77 years. He was graduated from the Rush Medical College, Chicago, in 1866, and was a member of the Clinton County Medical Society, and the Indiana State Medical Association. Dr. Brown was a veteran of the Civil War.

JOHN W. COOK, M.D., Pendleton, died January 1, aged 68 years. Death was due to the effects of paralysis. Dr. Cook was graduated from the University of Louisville Medical Department in 1879 and was a member of the Madison County Medical Society, the Indiana State Medical Association, and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. R. C. KENNEDY is spending several weeks in Vero, Fla.

DR. CHARLES F. MORRIS has been appointed city chemist of Anderson to succeed Dr. Roush.

DR. H. H. SHOOK, Cincinnati, and Miss Esther M. Hiner, Butler, were married December 31.

DR. J. Y. McCULLOUGH has recently been appointed physician for the Floyd County jail and asylum.

DR. DON C. McCLELLAND has been appointed coroner of Tippecanoe County to succeed Dr. W. F. McBride.

DR. H. S. McKEE has removed from New Point to Greensburg for the continuance of his practice of medicine.

DR. EVERETT AIKMAN has been appointed county physician to Montgomery County to succeed Dr. A. A. Swope.

DR. FRANK E. RAY, Shelbyville, has been appointed county coroner for Shelby County to succeed Dr. B. G. Keeney.

DR. C. E. LINTON of Medaryville has been appointed county coroner for Pulaski County to succeed Dr. R. J. Ives of Francesville.

ACCORDING to newspaper report all but one of the doctors in Lawrence County have been fined for failure to report births promptly.

THE regular monthly meeting and dinner of the Madison County Medical Society was held January 12 at the Y. M. C. A. home, Anderson.

DR. GEORGE F. KEIPER, Lafayette, suffered considerable loss when his car was burned in a fire in the garage in which the car had been left.

PROFESSOR C-E A. WINSLOW, of Yale University, has been chosen to direct public health work of the League of Red Cross Societies in Europe.

DR. CHARLES B. COMPTON has located in Frankfort for the practice of medicine, where he has become associated with Dr. W. L. Hammersley.

ON January 1 the first "Osteopathic Hospital" in Indiana was opened at Indianapolis by M. E. Clark and C. B. Blakeslee, osteopaths of that city.

DR. ELMER SINGER and Miss Helen Ault, both of Fort Wayne, were married at the Plymouth Congregational Church, Fort Wayne, on January 25.

THE annual meeting of the Kosciusko Medical Society was held at the Hotel Hays, War-

saw, December 28. The meeting was well attended and a fine program enjoyed.

DR. CLAUDE F. FLEMING, who has been practicing medicine in Elkhart for the past fifteen years, has removed to Chicago to take up special training in genito-urinary diseases.

THE regular meeting of the Wells County Medical Society was held in Bluffton, December 21. A fine scientific program was enjoyed, followed by a luncheon and social hour.

DR. MERRIL F. STEELE, Indianapolis, has been appointed superintendent of the Hope Methodist Hospital of Fort Wayne, a branch of the Methodist Episcopal Hospital in Indianapolis.

A WISCONSIN brewery has asked permission to make beer for medicinal purposes, as announced by the prohibition director of Milwaukee. The request was refused tentatively.

ACCORDING to newspaper report a hiccoughing epidemic which first struck Paris is now in evidence in New York and probably will extend to the west in due time. Doctors term the malady nervous flu.

A MEMORIAL tablet to the memory of Major Paul B. Coble, the only Indianapolis physician to give his life in the World War, was unveiled at the Indiana University Medical School building on January 13.

THE board of directors of the proposed Cass County Hospital will call for a \$100,000 bond issue to raise funds for the erection of the hospital. The work on the building will probably be started in the spring.

THIRTY members of the Huntington County Medical Society and their wives were entertained at a banquet on January 4 in the Commercial Club rooms. This was the first meeting of the year and there was an exceptionally good program.

THE Winamac Hospital was destroyed by fire on January 4. Three patients were in the hospital at the time and all were taken out without injury. The loss is estimated at about \$15,000. The institution was the property of Drs. George and Clem Campbell.

THE annual election of the Miami County Medical Society was held December 31 with the following result: President, Dr. George Van

Mater; vice-president, Dr. Homer Hass; secretary-treasurer, Dr. M. A. McDowell; censor, Dr. Newel of Converse.

WORK will start soon at the Indiana Village for Epileptics at Newcastle on additional buildings for women, according to a statement by Amos W. Butler, secretary of the State Board of Charities. The village as it is now equipped can care for only men and boys.

DR. JOHN D. DONOVAN, who died recently at his home in Lovington, Illinois, had the unique distinction of being the father of ten children, eight of whom adopted the same profession as their father. It is believed that the United States contains no parallel case.

THE Dubois County Medical Society met in Jasper, January 18, and elected the following officers: President, O. A. Bigham; vice-president, L. A. Salb; secretary-treasurer, W. D. Brétz. The meetings are to be discontinued until the roads are in better shape.

ONE hundred percent more licenses were granted to doctors in the State of Indiana in 1920 than in 1919, according to the records of the State Board of Medical Registration and Examination. The report shows that 167 physicians were licensed during 1920 and only 71 during 1919.

THE Goshen Medical Society in recent meeting elected officers for the new year as follows: Dr. Irvin J. Becknell, president; Dr. D. L. Miller, vice-president; Dr. Harry E. Vander Bogart, secretary; Dr. E. E. Ash, treasurer; Dr. C. Yoder, librarian; Dr. M. K. Kreider a member of the board of censors.

DR. EDOUARD J. DUBOIS, city bacteriologist for Indianapolis, has recently tendered his resignation to the secretary to the board of public health. Dr. DuBois has accepted a commission as Major in the United States Public Health Service. The resignation is to become effective as soon as the board can release Dr. DuBois.

AT a meeting of the State Board of Medical Registration and Examination held at the Claypool Hotel, Indianapolis, January 14, the following officers were elected: W. A. Spurgeon, Muncie, president; E. M. Shanklin, Hammond, vice-president; W. T. Gott, Crawfordsville, secretary; Paul R. Tindall, Greensburg, treasurer.

AN ordinance of San Antonio, Texas, which provides that the city board of health may require the vaccination against smallpox of pupils,

teachers, and school employees, has been held valid by the Court of Civil Appeals of Texas. The court decided that vaccination could be required even though no epidemic of smallpox existed.

THE report of the division of infant and child hygiene of the Indiana State Board of Health shows that 1,498 children were examined in the first year of the department's operation as a separate division of the board of health. The division has carried on a wonderful work, but more funds must be forthcoming if the work is to be continued.

AT the annual meeting of the Public Health Nursing Association, held January 13 in Indianapolis, the following officers were elected: President, Mrs. Henry B. Heywood; second vice-president, Mrs. R. C. Green; corresponding secretary, Mrs. W. H. Insley; assistant treasurer, Mrs. George C. Hitt. Other officers were held over from last year.

THE Schneck Memorial Hospital, Seymour, received a Christmas gift in the form of the property adjoining the hospital on the east side. The building is to be remodeled and equipped for the home of the nurses. The nurses have formerly occupied rooms in the hospital, and their moving will greatly relieve the congested condition in the hospital.

REAR ADMIRAL EDWARD RHODES STITT, commanding officer of the United States navy medical school since 1916, has been appointed surgeon general of the navy to succeed Rear Admiral W. C. Braisted, who retires after serving in this position for eight years. Admiral Stitt is best known to the medical profession as an authority on tropical diseases.

THE Warrick County Medical Society met January 5 and elected the following officers: President, Dr. N. M. Spradley; vice-president, E. L. Youngblood; secretary-treasurer, Dr. W. P. Ford; censors, Drs. P. E. Wilson, J. G. Hoover and William H. Mills. Dr. Samples was elected as delegate to the State Medical Association and Dr. W. W. Rhudy as alternate.

Two pavilions for adult patients and a building for children at Sunnyside are needed immediately, according to report of the institutional construction expert of the National Tuberculosis Association. Buildings of the pavilion type for ambulant and semi-ambulant patients are needed. Two pavilions, one for women and the other for men, and a building for children should be erected at once.

ONE of the most promising movements inaugurated by any American city for an intensive educational attack on cancer was that formed in the city of Cincinnati on November 4, 1920. This organization, known as the Divisional Council on Cancer Control, was launched under the joint auspices of the City Health Department, the Academy of Medicine, and the Public Health Federation, and is financed by the Council of Social Agencies of the Federation.

ALL the hospitals and contract hospitals of the U. S. Public Health Service in the semi-arid southwest are already crowded with tuberculosis patients and the Public Health Service has been forced to transfer patients from Tucson, Ariz., and other western hospitals to sanatoriums near Asheville, N. C., and elsewhere. Surgeon General Cumming again renews his warning against tuberculosis patients leaving sections where the government is able and willing to care for them and going to the southwest on their own initiative.

BEGINNING February 8th a course in psychiatry, neurology and neuropathology was started under the direction of Drs. Bahr, Neu, and Humes, with clinics and lectures given at the pathological department of the Central Indiana Hospital for the Insane. The lectures and clinics are held every Tuesday at 1:30 p. m. There is also a course of lectures and clinics in psychopathology being given at the pathological department of the Central Indiana Hospital for the Insane on every Saturday at 2:00 p. m., by Dr. Max Bahr.

DR. HENRY S. HOUGHTON has been appointed director of the Peking Union Medical College. Dr. Houghton, a graduate of the Ohio State University and of the Johns Hopkins Medical School, has spent the greater part of the past fifteen years in China, where he has served as physician of the WuHu General Hospital, as Dean and Professor of Tropical Medicine of the Harvard Medical School of China in Shanghai, and recently as a member of the staff of the China Medical Board and Peking Union Medical College in Peking.

THE annual election of officers of the Indianapolis Medical Society was held January 5 and new officers elected as follows: Dr. A. L. Wil-

son, president; Dr. H. G. Hamer, first vice-president; Dr. Charles D. Humes, second vice-president; Dr. Leslie H. Maxwell, secretary-treasurer (re-elected). Drs. C. E. Cunningham and John Pfaff were elected members of the judicial council. Delegates to the meeting of the Indiana State Medical Society, which will be held next September, are Drs. L. D. Carter, Alfred Henry and W. D. Hoskins. Alternates are Drs. Bernhard Erdman, Ralph Chapell, J. Don Miller and Frank E. Abbett.

THE United States Civil Service Commission announces an open competitive examination for biologist. Two vacancies in the Hygienic Laboratory, Public Health Service, Washington, D. C., at \$2,500 to \$3,000 a year and similar vacancies will be filled from these examinations. All citizens of the United States who meet the requirements are eligible. The duties of appointees will consist of research work in the elaboration of drugs for the treatment of tuberculosis. Applicants should apply at once for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., as examinations and receipt of applications close March 15, 1921.

DURING January the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Calco Chemical Co.:

Cinchophen Tablets.

Hynson, Westcott & Dunning:

Globules of Benzyl Benzoate.

Heyl Laboratories:

Acriflavine,

Proflavine.

Intra Products Co.:

Calcium Cacodylate—IPCO.

Winthrop Chemical Co.:

Salophen.

Morgenstern & Co.:

Salophen.

MEMBERS of the Cincinnati (Ohio) Health Board and its officials, including the health commissioner, assistant health commissioner and the mayor of the city, have been made defendants in an action for \$25,000 damages filed by a local resident on the ground that his twelve-year-old son was subjected improperly to a physical examination. The petition states that

the district physician at the school where the boy attends, under authority of the board of health, compelled him to submit to a physical examination and "publicly told the child, in the presence of eight other pupils," that he was suffering from "enlarged tonsils". It is alleged this was communicated to the father in an unsealed envelope, and that the child's name was published on a chart in the school as "an underweight," and that as a result of other pupils knowing these things the boy has been shunned by his former playmates and is humiliated by being dubbed "underweight" and denied the privilege of entering their games.

THE hotel headquarters for the annual session of the American Medical Association to be held in Boston, June 6-10, 1921, as reported by the Local Committee on Arrangements and published in *The Journal of the A. M. A.*, January 1, 1921, are as follows:

SECTIONS	HEADQUARTERS
Practice of Medicine.....	Hotel Somerset
Surgery, General and Abdominal.....	Hotel Lenox
Obstetrics, Gynecology and Abdominal Surgery.....	Hotel Touraine
Ophthalmology.....	Hotel Vendome
Laryngology, Otology and Rhinology.....	
.....	Hotel Brunswick
Diseases of Children.....	Parker House
Pharmacology and Therapeutics.....	
Pathology and Physiology.....	Hotel Bellevue
.....	Copley Square Hotel
Stomatology.....	Parker House
Nervous and Mental Diseases...Young's Hotel	
Dermatology and Syphilology.....	
.....	Copley Square Hotel
Preventive Medicine and Public Health.....	
.....	Hotel Bellevue
Urology.....	Hotel Westminster
Orthopedic Surgery.....	Adams House
Gastro-Enterology and Proctology.....	
.....	Hotel Essex

The Committee on Hotels, of which Dr. John T. Bottomley is chairman and Dr. Stephen Rushmore is secretary, requests that those who desire to secure hotel reservations shall write to the committee. The section in which the applicant is especially interested, the number in the party and when it is planned to arrive in Boston should be stated. Address communications to one of the officers at the Boston Medical Library, 8 The Fenway.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph.....	R. B. Dugdale.....	75	83
2.	Franklin.....	E. M. Glaser.....	8	10
3.	Adams.....	L. E. Somers.....	11	12
4.	Carroll.....	Eva N. Kennedy.....	20	22

No.	County	Secretary	1920	1921
5.	Hendricks.....	W. T. Lawson.....	16	19
6.	Kosciusko.....	W. B. Siders.....	26	32
7.	Lawrence.....	F. S. Hunter.....	21	24
8.	White.....	H. B. Gable.....	10	11

INDIANA STATE MEDICAL ASSOCIATION Secretary's Report

To the Council:

After reporting a decline in membership for the past two years, it is gratifying to be able to present a gain in members for the year 1920. The indications are that our equilibrium will be fully established in 1921, and we will regain our pre-war standing.

Membership Jan. 1, 1920.....	2,459		
Died.....	31		
Removed.....	27		
Retired.....	6		
Delinquent.....	194	258	2,201

New members..... 312

Membership Jan. 1, 1921.....2,513

The gain this year is due to the activities of the 100 Per Cent Club, of which forty-four counties out of a possible eighty-nine were entitled to membership. Of these forty-four, thirty-five counties showed more than 100 percent of their last year's membership.

The following counties enrolled more members this year than any time since 1910; namely, Clinton, 28; Delaware-Blackford, 74; Fayette, 18; Marion, 366; Monroe, 24; St. Joseph, 75; Tippecanoe, 62, and Vigo, 98.

For this coming year, we will have a very modest slogan—"10 percent gain in membership"—although I would like to make it "Our goal, 3,000 members". If we achieve this 10 percent increase, our membership will be a little over 2,700, which is just enough to make it over the previous top notch of 2,669 members in 1917.

Respectfully submitted,
CHARLES N. COMBS, Secretary.

THE COUNCIL

The regular mid-winter meeting of the Council of the Indiana State Medical Association was held January 20, 1921, in the Assembly Room of the Board of Trade Building, Indianapolis, 11:00 a. m., with the following members present:

Dr. Walter Leach, Third District; Dr. A. G. Osterman, Fourth District; Dr. Spencer M. Rice, Fifth District; Dr. F. J. Spilman, Sixth District; Dr. S. E. Earp, Seventh District; Dr. E. M. Conrad, Eighth District; Dr. Wm. R. Moffitt, Ninth District; Dr. E. M. Shanklin, Tenth District; Dr. E. E. Morgan, Twelfth District; Dr. David Ross, President; Dr. A. E. Bulson, Jr., Editor of *THE JOURNAL*; Dr. Charles N. Combs, Secretary; Dr. Frank B. Wynn, Chairman of the Committee on Medical Defense; Dr. W. N. Wishard, Chairman of the Committee on Legislation, and Mr. F. E. Raschig.

Reading of the minutes of the last meeting, which were approved.

Dr. E. M. Shanklin, of Hammond, was elected chairman of the Council, succeeding Dr. G. W. H. Kemper, resigned.

The secretary-treasurer made his annual report covering the membership and the finances of the general fund and of the medical defense fund, which was accepted.

Dr. Bulson gave his annual report concerning *THE JOURNAL*, stating that since the South Bend session he had made his contracts for this year for the printing of *THE JOURNAL*, and found that the cost of

paper had so increased that \$1.50 would not be sufficient to cover the expense of publication. He asked for \$2.00 per member, which the Council readily granted, having knowledge that other state societies were paying three, four and even five dollars per year for their state journals. We are able to make a very large saving in comparison to other associations by reason of the fact that we do not pay our editor a salary comparable to the salary paid editors of many other state journals. Dr. Bulson was again tendered a vote of thanks from the Council for his most excellent Journal and his invaluable services as editor and manager.

The councilors present made their detailed reports concerning their respective districts.

The question of a few very weak societies in the State was discussed, and it was thought best to continue a plan which had previously been invoked in stabilizing these societies. We already have three hyphenated county societies, and, on motion carried, the Council recommended the formation of the following additional joint societies: Floyd-Clark, Pulaski-Starke, Fayette-Franklin. The secretary was instructed to arrange with the officials of these counties to perfect the amalgamation.

Dr. W. N. Wishard spoke concerning the situation in the Legislature now in session. In accordance with instructions previously received, he had employed Mr. F. E. Raschig as assistant during January and February, and the Council voted Mr. Raschig a salary of \$300.00 for this period. The Council heartily endorsed the attitude of the Committee on bills already considered, and expressed themselves as having implicit confidence in future decisions of Dr. Wishard and his Committee.

Dr. Frank B. Wynn reported applications from members for medical defense, and stated that the Committee had not yet decided upon an attorney to succeed Mr. Schortemeier. On motion carried, Dr. Wynn was instructed to make a contract at once with Mr. A. G. Cavins, our former attorney, who left us only to enter the Service.

The secretary reported that he had made the revisions of the medical defense blanks, as ordered by the South Bend session, and the Council ordered him to have them printed at once.

The Council discussed with feelings of deep regret the resignation of its former chairman, Dr. G. W. H. Kemper, who has now gone to California. In view of his many years of faithful service to this Association, it was voted to make him an Honorary Member of the Indiana State Medical Association for life. So far as the present secretary's knowledge goes, during his tenure of office, this action has been taken but once before, and that in the case of Dr. W. H. Wishard, who at that time was one of the surviving charter members of the Association. Dr. Kemper was elevated to this position in order that the American Medical Association could confer upon him the rank of Affiliate Fellowship.

After consideration of a letter from Dr. F. R. Green, it was voted that our Association would not be interested at the present time in the recommendation of sections on Public Health and Sanitation with the Admission of Laymen.

The secretary brought to the attention of the Council the storage of furniture, which was formerly in the executive secretary's office, and a motion carried that Dr. Ross arrange for the sale of this furniture.

A motion carried to increase the secretary-treasurer's salary to \$500.00.

Chairman appointed Drs. Conrad, Spilman and Morgan to audit the treasurer's books.

The Council, before adjourning, expressed its

thanks to President Ross for entertaining them as his guests for luncheon.

CHARLES N. COMBS, Secretary.

TREASURER'S REPORT FOR THE YEAR 1920 General Fund

Balance on hand Jan. 1, 1920.....	\$ 2,018.78
Membership dues at \$4.00 per member.....	9,992.00
(15 members in service, and dues remitted)	
South Bend exhibitors.....	305.00
Total	\$12,315.78

DISBURSEMENTS

Journal subscriptions, \$1.00 per member.....	\$2,513.00
Executive Secretary's office, Jan., 1920..	\$350.10
Furniture storage 11 months.....	91.35
Rental	441.45
Stenographic report.....	344.55
Scientific exhibit.....	202.36
Programs	26.15
Registration clerks.....	18.00
Badges	23.19
Signs	4.50
Secretary-Treasurer, stenographer.....	739.00
Secretary-Treasurer, honorarium.....	300.00
Secretary-Treasurer, postage and incidentals....	71.51
Secretary-Treasurer, bond.....	35.00
Taxes	31.48
Committees	183.07
Councilors	42.34
Printing	116.78
South Bend session.....	813.75
Total disbursements.....	5,287.38
Balance on hand Jan. 1, 1921.....	\$ 7,028.40

Medical Defense Fund

RECEIPTS:	
Cash on hand Jan. 1, 1920.....	\$ 2,930.99
Liberty Bonds January, 1920.....	5,000.00
Interest	422.72
Nothing received from General Fund on account of amount on hand being over \$6,000.00.	
	\$ 8,353.71

DISBURSEMENTS:	
Attorney's salary.....	\$1,375.00
Bond and incidentals.....	28.00
Outside attorney's fees allowed.....	424.50
	1,827.50
Cash on hand Jan. 1, 1921.....	\$1,526.21
Liberty Bonds.....	5,000.00
	\$ 6,526.21

Respectfully submitted,

CHARLES N. COMBS, Treasurer.

The treasurer has just finished reviewing the finances of the Association for the past eleven years, and wishes to place the following recapitulation on record so that it can be found in the files of THE JOURNAL of the Indiana State Medical Association for the benefit of future officers:

INCOME

	Dues	Exhibitors	Interest	Total Income
1910	\$4,672.00	\$	\$	\$4,672.00
1911	5,054.00	.....	.....	5,054.00
1912	4,960.00	.....	.....	4,960.00
1913	5,100.00	180.00	.....	5,280.00
1914	5,140.00	185.00	69.21	5,394.21
1915	5,250.00	346.00	100.21	5,696.21
1916	5,170.00	215.00	119.95	5,504.95
1917	6,161.00	290.00	135.73	6,586.73
1918	9,649.00	200.00	75.51	9,924.51
1919	7,036.00	570.00	7.52	7,613.52
1920	9,992.00	305.00	422.72	10,719.72

EXPENDITURES

	Journal	Adminis- tration	Printing, Postage	Annual Session	Medical Defense	Total Expenditures
1910..	\$1,774.00	\$ 552.93	\$144.75	\$ 75.00	\$	\$2,546.68
1911...	1,895.25	517.11	143.15	100.00	.....	2,655.51
1912...	1,860.00	466.05	69.00	151.00	.....	2,546.05
1913...	1,912.50	387.28	239.90	472.06	920.40	3,932.14
1914...	1,927.50	411.82	186.85	526.35	1,311.50	5,064.02
1915...	1,968.75	584.71	334.05	822.78	1,457.86	5,168.15
1916...	1,938.75	829.19	224.56	901.53	1,357.75	5,251.78
1917...	2,001.75	3,444.57	192.40	631.32	1,843.24	8,113.28
1918...	1,915.50	2,826.79	700.36	415.57	531.01	6,389.23
1919...	1,844.25	3,396.55	520.22	938.50	502.13	7,201.65
1920...	2,513.00	1,843.85	116.78	813.75	1,827.50	7,114.88

(Administration includes all expenses of Secretary's, Treasurer's, Executive Secretary's offices, also councilor and committee expenses.)

INDIANA ACADEMY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY

The mid-winter meeting of the Indiana Academy of Ophthalmology and Oto-Laryngology was held at the Claypool Hotel at Indianapolis on January 20, with an exceptionally large attendance, there being nearly seventy-five specialists registered. Dr. Joseph Addison Stucky, of Lexington, Ky., and Dr. Henry Mundt, of Chicago, were guests of the Academy.

The members of the Academy were the guests of the Indianapolis eye, ear, nose and throat men in the evening at the University Club, where dinner and numerous social stunts added to the entertainment.

The following is the scientific program carried out in full at the afternoon session: Address by the President; "Roentgenology of the Mastoid," B. R. Kirklin, Muncie; "Personal Experience with the Trephine Operation," F. A. Morrison, Indianapolis; "Streptococcic Osteomyelitis of the Temporal Bone," Harry Boyd-Snee, South Bend; "Mercurochrome in Ophthalmic Therapy," M. Ravdin, Evansville.

TIPTON COUNTY

The Tipton County Medical Society met in regular session on January 11, at Tipton. A resolution was passed declaring the Society in favor of every regularly licensed physician of the State of Indiana paying a registration fee of one dollar (\$1.00) per annum; said fee to be paid in and kept on hand by the State Board of Medical Registration and Examination for the purpose of defraying any expense created in behalf of the welfare of the medical profession of the State of Indiana.

The Society also passed a resolution declaring against the lowering of the standard of requirements for the practice of the healing art. The stand was taken that the fight is not against the man or woman who wishes to practice the healing art *providing* he or she has met or is willing to meet the standard of requirements that medical men and women have to meet and comply with; but is against those practicing the "healing art" after only a few weeks of superficial "study".

Copies of these resolutions were forwarded to the Senator and Representative, and to the Chairman of the Legislative Committee.

Election of officers for the ensuing year was as follows: President, R. M. Recobs, Tipton; vice-president, W. F. Dunham, Kempton; secretary-treasurer, L. M. Reagan, Tipton.

Adjourned.

L. M. REAGAN, Secretary.

JASPER-NEWTON

The Jasper-Newton County Society met January 28, with Dr. W. C. Mathews at Kentland, fifteen of the twenty-five members being present. The society was very fortunate in having the topic of the evening, "Epilepsy", presented by Dr. W. C. Van Nuys, Superintendent of the Indiana Village for Epileptics.

Dr. Van Nuys is master of this subject. While epilepsy has always been looked upon as practically an incurable disease, he is convinced that on account of the great number of these cases that give a positive Wassermann, there is a field of treatment in which a great amount of good may be done. He urges an extension of the state work with an equipment by which a patient may be sent from any part of the state, and a thorough diagnosis of his case made.

After an elaborate banquet served by Dr. and Mrs. Mathews, the following resolution was adopted:

RESOLVED: That the Jasper-Newton County Society extend a vote of appreciation to Dr. Van Nuys for the paper of the evening, and especially for his

plan for the extension work in favor of epileptics throughout the state.

O. E. GLICK, Secretary.

TIPPECANOE COUNTY

Regular meeting called to order at Hotel Lahr December 28 by Censor VanReed, the president and vice-president being absent. Minutes of previous meeting read and approved without change.

Clinical Cases Reported:

DR. SHAFER: Child nine months old, slightly anemic. Parents noticed enlargement of abdomen, thought it was gaseous distension. No subjective symptoms. Enlargement has increased rapidly past two weeks. Examination: Mass occupying right half of abdomen, from costal border to crest of ileum and extending to umbilicus. Abdomen opened, found retroperitoneal tumor 5 x 6 inches attached to surrounding tissues by dense adhesions. Inadvisable to remove. Aspirated part of gelatinous contents of sack for laboratory examination. Provisional diagnosis: Sarcoma of kidney.

DR. RUSCHL: Female, white, age 22 years, high school teacher. Initial complaint: December 8 developed acute soreness over region left shoulder and left side of neck; felt chilly, slight elevation temperature, felt tired, dull, apathetic. Following day pain more severe associated with photophobia, slight headache, and seemed quite dull. Physician called; he advised to discontinue work and remain in bed. By December 10 had lapsed into comatose spells from which could be aroused, but immediately returned to sleep. Didn't volunteer conversation. Entered hospital December 14 in a stuporous condition, but could be aroused by speech; responded intelligently to questions. Had imperfect deglutition and was unable to void; catheterization yielded 63 ozs. urine.

On Entrance: Temperature 101, pulse 80, respiration 16. Stupor deepened, eyes closed all the time, some delirious talking of school work. Developed a general yielding spasticity of muscles causing rubbery movements. Temperature around 102 for about one week, then down by lysis, reaching normal in ten days after admittance (December 24).

Examination: Practically entire skull negative, including eyes and mastoid. Thyroid negative. Negative Kernig and Babinski. Knee reflexes normal. Urinary organs negative. Widal negative. Laboratory examination of feces negative. Spinal puncture showed slight increase in pressure, but on the whole negative. No definite blood pathology. Leucocytes on December 14, 11940; on December 17, 7700. No history of influenza. Diagnosed encephalitis lethargic, which was confirmed on December 18 by Dr. Hugh Patrick.

Stupor gradually began to subside, resulting finally in insomnia and desire to talk. Hesitation in speech, seemingly to be due mainly to inability to move lips. Some tremor, some nystagmus. Temperature became normal, appetite became normal. Articulation almost normal. Spasticity disappearing. Catheterization stopped December 31. Convalescing. Prognosis as to complete physical and mental recovery is doubtful.

New Business:

On suggestion that a committee should be appointed to confer with DeLong for the betterment of the Doctors' Telephone Exchange, a motion was made and carried that Dr. Shafer be appointed for the performance of that duty.

The synopsis of a proposed bill for the creation of a State Board of Chiropractic was read by Dr. Campbell of the Legislative Committee. The following motion was made and carried:

The Tippecanoe County Medical Society is utterly opposed to this or any other similar bill.

A proposed form of a local Medical Directory as worked out by DeLong of the Doctors' Exchange was presented. It was moved and carried that this proposition be tabled for one month.

A communication from Dr. J. N. Hurty was read. The text of the communication was that there was no statute in Indiana or no rule of the State Board of Health requiring a silver nitrate solution to be dropped into the eyes of a new-born child.

Dr. Bauer as secretary of the City Board of Health stated that the death rate in Lafayette was too high because of the great number of non-residents dying in our hospitals and the Soldiers' Home, all of which are credited to us. He also stated that the investigation of the local milk supply revealed that the quality was just within the law. Dr. Campbell moved that a committee of three be appointed by the president to wait upon the mayor and insist that the city milk inspector perform his duties as specified by law. Motion seconded, freely discussed and carried. The acting president announced that he would leave the appointing of the committee to the regular president. Dr. Hunter moved: That Dr. Kern be requested to report the milk situation as found by the State Inspector. This motion was seconded and carried.

The Society proceeded to the election of officers with the following result: President, D. C. McClelland, Lafayette; vice-president, Ed B. Ruschli, Lafayette; treasurer, Charles Hupe, Lafayette; censor, Wm. R. Moffitt, West Lafayette; state delegate, F. S. Crockett, Lafayette; secretary, Wm. M. Reser, Lafayette.

The secretary made the following report:

Number meetings held during year 1920.....	10
Average number present.....	25
Number members beginning year 1920.....	58
Number members lost by moving away during year	2
Number new members admitted during year....	4
Number members at end of year 1920.....	60

Adjourned; members present 27, visitors present 1.

W. M. RESER, Secretary.

INDIANAPOLIS MEDICAL SOCIETY

November 23d.

Meeting was called to order by the president, Jas. H. Taylor.

Minutes of the previous meeting were read and approved.

The applications of Drs. Chester A. Stayton and J. L. Jackson were read for the first time.

The application of Dr. H. W. Corya was read for the second time. Dr. Emory D. Lukenbill was elected to membership in the Society.

Dr. Lewis C. Cline, an active member of the Society for thirty-four years, was elected to honorary membership.

The offer of the Indiana Dental College of a meeting place for the local Medical Society was referred to the Council.

PROGRAM:—Paper—"Puerperal Eclampsia":

DR. JANE M. KETCHAM.

Abstract—Eclampsia is a disease probably of endocrine or toxic origin appearing in the latter months of pregnancy. It is one of the worst conditions which ever confronts an obstetrician. Its presence may be forecasted by scanty urine with albumen and casts retinal hemorrhages and exudates, and blood pressure above 150 mm. Hg. systolic, and mounting. The newer blood chemistry, to date, will give the picture of nephritis, but will not differentiate eclampsia from uremia, being allied conditions, but not identical.

Treatment may be radical or conservative and the conservative is favored.

Paper—"Pathology, Diagnosis and Surgical Treatment of Cancer of the Stomach": DR. W. D. GATCH.
No abstract submitted.

Discussion—Dr. A. M. Mendenhall. Much progress has been made in the last ten years in this subject. The mortality has been greatly reduced due to conservative treatment. Radical measures are contra-indicated. The necessity of prenatal care was emphasized, especially blood pressure readings. Many cases have eclampsia without albumen or casts being found. Pituitrin and ergot ought not to be used to induce labor. Do not overtreat cases during convalescence.

Dr. J. O. RITCHIE—Etiological factor in eclampsia not definitely known. Much discussion regarding the role played by nitrogenous elements in blood. Creatinin not increased. Acidosis theory practically abandoned. The endocrine secretions combat the foreign and harmful substances in the blood stream of pregnant women. In treatment, blood transfusion or horse serum may be beneficial.

Dr. RALPH L. LOCHRY—Ninety-five per cent of stomach tumors malignant. Cooperation of general practitioner and x-ray specialist is necessary. X-ray helps decidedly in determining operable cases. Aids in determining metastases in other organs (lungs, liver, etc.). An ulcer involving the pyloric end is a surgical case. Differential diagnosis—tuberculosis of stomach rarely found—gall bladder involvement may be confusing.

Dr. O. B. NORMAN—Cited a case of cancer of stomach recently seen which was operated with considerable improvement. Emphasized importance of operations.

Dr. F. E. ABBETT—Commented on growth of conservative treatment in eclampsia. Surgeon without obstetrical training not competent to consider these cases. Veratrum is a very dangerous drug. Is given empirically. Should not be given unless in cases of rapid heart and high blood pressure. Mentioned the importance of eye ground examinations.

Dr. C. E. FERGUSON—Too much surgery has been done in eclampsia. Has reported six cases in which eclampsia came on at the eighth month and by conservative treatment went to term. Of these six cases—five living children and one dead resulted. No two cases alike and each one must be carefully studied. Ether is the anesthetic of choice to control spasm. Epigastric pain, an early symptom of eclampsia, is often mistaken for gallstone colic. Morphine has been criticized because it locks up the secretions. This objection is not well taken.

Dr. L. BURCKHARDT—Owing to prenatal starving during the war eclampsia has decreased in Germany, while Switzerland shows an increase. In these cases the general practitioner gets alarmed and rushes to the surgeon for help. Eclampsia is a symptom and not a clinical entity. Placental infarcts give a very favorable ground for the absorption of toxins from decaying tissues.

Dr. A. B. GRAHAM—Surgery has made much progress in cancer of the stomach. However, the surgeon does not get these cases early enough.

Emphasized the importance of chemical analysis of gastric contents in suspected cases. Constant pain is a constant symptom of cancer of stomach. Impairment of motor activity also a symptom. X-ray is valuable in diagnosis.

Dr. A. S. JAEGER—Mentioned necessity of early study of these cases. Gastro enterostomy soon will be an obsolete operation. Eclampsia is a toxemia, probably an acidosis. Surgeons see cases late and do not have a fair chance.

DR. SCOTT R. EDWARDS—Discussed the contrast of blood sugar tolerance to glucose in cancerous and non-cancerous patients.

DR. WM. H. FOREMAN—Dilatation of the stomach has contributed to the relief of patients suffering from inoperable cardiac cancers. These cases demand treatment.

DR. J. M. KETCHAM (in closing)—Disclaimed any intention of publicly assailing the surgeon.

DR. W. D. GATCH (in closing)—Patients should be kept under expert dietetic care following operation. Meeting adjourned; attendance 114.

L. H. MAXWELL, Secretary.

November 30th.

The meeting was called to order by the president, Dr. Jas. H. Taylor.

The minutes of the previous meeting were read and approved. Dr. Alfred Henry, President of the Council, reported that the next meeting would be held at the Indiana Dental College in order that the Society might judge the advisability of accepting the Dental College invitation.

PROGRAM:—"Alpha and Omega":

DR. A. T. CUSTER.

Abstract—The beginning and the end. The mouth and the rectum. A war against mouth filth has been waged by both physicians and dentists. Little or nothing has been said about the rectum. Few consultants ever make a rectal examination. Ninety percent of patients complaining of stomach and bowel trouble and those complaining of trouble in the reproductive organs have rectal trouble in some form. The close relationship between the nerve mechanism of the rectum and the so-called sympathetic nervous system must be patent to every physician as evidenced by the immediate response to rectal dilatation under anesthesia. Astonishing results are obtained in migrain and hysteria by simple dilatation of the sphincters. Twenty percent of gynecological disturbances are in the writer's opinion traceable to primary rectal disease. The careful physician is beginning to find in the rectal field conditions which at least are worthy of careful consideration in its relation to other organs and their pathology.

Paper—"A Clinical Investigation of Halle's Hypothesis Concerning Renal Tuberculosis" (Lantern Slides):

DR. H. G. HAMER AND DR. H. O. MERTZ.

No abstract submitted.

Discussion—Dr. Geo. W. Combs—Dr. Custer made no mention of the absorption of toxins following occlusion from stricture or neoplasm. Theory of vaginocoele from accumulation in rectum is correct. What about the primary cause? We take a few stitches, bring the parts back to normal and the original cause is forgotten. There are many reflexes from the rectum, but I have never noted any head symptoms such as migraine. The connection of the hypogastric and inferior mesenteric plexi with the lower rectum is very close and we may have symptoms from them. The sciatic is a prolongation of the sacral plexus and naturally therefore may have abdominal reflexes and false sciatica.

DR. V. H. MOON—It is both a pleasure and an embarrassment to discuss a paper so complete. The distribution and the stage of the process is a large factor in the curability. I desire to question the lymphogenous origin of renal tuberculosis. The flow is from and not toward the kidney. A case of pulmonary tuberculosis may show tubercle bacilli in the urine and yet at death no tuberculous lesion be found in the kidney. The kidney parenchyma is not so favorable a soil for tuberculosis as the epithelial cells of the pelvis. Therefore, the pelvis is more

often attacked and not necessarily by the lymphogenous route. If there is a local circumscribed lesion in the parenchyma neither the patient nor the physician are aware of the fact nor is there any way of finding out. A pyelogram shows nothing and there are no tubercle bacilli in the urine. This is a medical case. In case of a lesion in the parenchyma not "walled off" there will be extension to the pelvis with a mixed infection, bleeding, tubercle bacilli in the urine, pain and bladder irritation. This case if not treated surgically will involve the entire kidney and result in an autonephrectomy.

DR. A. C. KIMBERLIN—Drs. Hamer and Mertz have given a very practical presentation of their subject and it is of great value and use to all of us. The types of infection mentioned all tend to become chronic. The tissues of the genito-urinary tract are all so closely connected that involvement of one generally means involvement of all of them. Temperature and loss of weight do not necessarily accompany renal tuberculosis. This condition may last a lifetime. Tuberculosis of the kidney is of hæmatogenous origin. A process in the parenchyma may apparently subside and we have a clinical but not a pathological cure. It is an excellent idea to get this condition before the general physicians in a practical form. They are the "shock troops" and must be ready for the emergency.

DR. P. E. MCGOWN—It is impossible to remember the many phases of the subject, but I do not believe this is practical. The closed type parenchymatous type is not diagnosed especially when these tend to spontaneous cures. If the symptoms persist the kidney will not yield to medical measures. If closed type in the beginning it is now turning to the open pelvic type. As to autonephrectomy: a kidney becoming caseous and having a closed ureter can cause trouble. Cited a case with symptoms recurring after two years. Cystoscopic examination showed a closed ureter. Also had a double tuberculous epididymitis and some prostatic involvement both secondary to the renal tuberculosis—I believe in operating tuberculous conditions of the genito-urinary tract.

DR. BERNHARD ERDMAN—Cited a case under observation for four years. Had bladder symptoms associated with infection somewhere. Family history of tuberculosis and cancer. Repeated cystoscopy failed to show bladder ulcerations. Last summer had an acute illness. Repeated examination of urine for tubercle bacilli negative. Ureteral catheterization impossible. Complete occlusion on left, partial on right side. Permanent catheter drainage established four weeks prior to death. Autopsy showed multilocular tuberculous abscesses of right kidney and complete autonephrectomy of left kidney. It seems to me this case shows all the stages mentioned by the writers.

DR. F. W. CREGOR—I am sorry Drs. Hamer and Mertz failed to show tuberculosis in other parts of the body. This is an important consideration before surgery is done. Certainly a bad kidney with a constantly potentially infected blood stream from other foci would speak against surgical interference.

DR. CUSTER (in closing)—I only wish to emphasize the prevalence of reflex disturbances due to rectal involvement.

DR. HAMER (in closing)—This subject offers a source of inexhaustible discussion. Much credit is due Dr. Mertz for working up the clinical presentation and also for translating the original article of Halle.

DR. MERTZ (in closing)—We hoped to prove or disprove curability of these conditions. We think we have disproved it. Also wish to call attention to

renal tuberculosis which oftentimes is evidenced by reflex and other symptoms from the bladder, prostate and other parts.

Meeting adjourned; attendance 106.

L. H. MAXWELL, Secretary.

RANDOLPH COUNTY

The Randolph County Medical Society at their regular meeting adopted the following Memorial and Resolutions upon the death of Dr. Granville Reynard:

"If it can be truthfully said of any man that he has done in his life more good than evil, then is the world better for his having lived. No need of praise can add to the measure of a life rounded up, completed, the volume ended, the record closed and sealed with the clasp of death.

"Memorials in brass and marble, In nndying verse and imperishable utterances, have come down through the ages to inspire the ambition of youth and stir the pulses of manhood, and it is fitting that we should pause a brief moment amid the absorbing cares of daily life and mark the footprints of our friend who has gone from among us.

"We have been called upon to note the passage of another human life, to pay a sincere tribute of respect and esteem to one who was once a colleague in our daily work. Now he has gone, and has taken with him to his new home an honest purpose to succeed, an earnest intention to do right and a conscientious determination to merit the esteem and confidence of his associates. Some men carry with them on earth a presence that invites your confidence, a demeanor that demands your respect, a simplicity that wins your love. Such was the man of whom we have been delegated to write. Poor indeed are our words to pay him tribute. No eulogy here pronounced can satisfy the high demands of those who were nearest to him and those who knew him best during his lifetime.

"Dr. Granville Reynard was born on a farm in Randolph County, Indiana, April 26, 1857, and departed this life November 25, 1920. He was the son of Nathan and Eliza Ann Reynard, pioneers of Randolph County, who reared their children in the peaceful, loving principles of the Society of Friends, which no doubt formed the basis for Dr. Granville's kindly, gentle disposition and everlasting loyalty to suffering mankind. He always craved for education, and after the foundation was laid in the district schools he attended the Winchester high school, and then followed a number of years teaching in district schools and the public schools of Union City, Ind. It was while teaching that he decided to cast his lot with that noblest of grand professions, Doctor of Medicine. Subsequently he began the study of medicine in the office of Dr. John T. Chenoweth of Winchester. He then attended the Ohio Medical College at Cincinnati, Ohio, where he graduated in the class of 1881. He immediately located at Castine, Ohio, where he practiced for over three years, and then moved to Union City, Indiana, where he continued the practice of medicine till the time of his demise.

"He was a member of the Union City Board of Education, United States Pension Examiner, surgeon for the Big Four Railroad Company, County Health Commissioner, and was a member in good standing of the Randolph County Medical Society, the Indiana State Medical Association, and the American Medical Association.

"Dead in the vigor of his manhood, in the hour of his best work.

"Dead in the bosom of his family; dead in the midst of faithful friends and colleagues. And yet, to live in the hearts we leave behind is not to die,

but laid to rest where the flowers of spring will bloom in beauty above his dust.

RESOLUTIONS

"WHEREAS: On the 25th day of November, 1920, our honored colleague passed away, and

"WHEREAS: During his life he was tireless in his profession, and

"WHEREAS: In his death his family has lost a devoted husband and father, the community a useful member, and the medical profession an honored and wise counselor;

"THEREFORE: Be it resolved, That this society tender our sincere sympathy to his family and friends, and that a copy of these resolutions be furnished the family of our deceased member, a copy retained by the society, and a copy sent to THE JOURNAL of the Indiana State Medical Association for publication.

"Committee,

"GRANT C. MARKLE, M.D.,

"F. A. CHENOWETH, M.D."

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

NEOCINCHOPHEN.—The ethyl ester of methyl-phenyl-quinolin-carboxylic acid. It was first introduced as novatophan. The actions and uses of neocinchophen are the same as those of cinchophen (New and Nonofficial Remedies, 1920, p. 224), only it is tasteless.

TOLYSIN.—A brand of neocinchophen complying with the N. N. R. standards. It is supplied in the form of a powder and as tolysin tablets 5 grains. Calco Chemical Co., Bound Brook, N. J.

SALIGENIN.—Salicyl Alcohol. Saligenin is a local anesthetic, similar in action to procaine. It is said to be as effective as procaine, but much less toxic; also the anesthesia produced lasts longer, and for this reason the addition of epinephrin is not necessary. Saligenin is a white solid soluble in water.

SALICAIN.—A brand of saligenin complying with the N. N. R. standards. Calco Chemical Co., Bound Brook, N. J. (*Jour. A. M. A.*, Jan. 8, 1921, p. 113).

PNEUMOCOCCUS VACCINE No. 14—BEEBE.—A pneumococcus vaccine (see New and Nonofficial Remedies, 1920, p. 285) containing Types I, II, III and IV diplococci pneumoniæ in equal proportions, suspended in physiological solution of sodium chloride, each Cc. containing 500 million killed bacteria. Marketed in vials of 6 Cc., 10 Cc., and 20 Cc. Beebe Laboratories, Inc., St. Paul, Minn.

TYPHOID-PARATYPHOID VACCINE No. 39—BEEBE.—A typhoid vaccine (see New and Nonofficial Remedies, 1920, p. 291) marketed in packages of three 1 Cc. vials, each Cc. containing 1,000 million killed typhoid bacilli, 500 million each of killed paratyphoid bacilli A and killed paratyphoid bacilli B, suspended in physiological solution of sodium chloride; also marketed in 30 Cc. vials. Beebe Laboratories, Inc., St. Paul, Minn.

COLON VACCINE (ACNE) No. 11—BEEBE.—A colon bacillus vaccine (see New and Nonofficial Remedies, 1920, p. 282) marketed in packages of six 1 Cc. vials, each Cc. containing 1,000 million killed colon communis bacteria suspended in physiological solution of sodium chloride; also marketed in packages of one 10 Cc. vials and in packages of one 20 Cc. vials. Beebe Laboratories, Inc., St. Paul, Minn.

ACNE BACTERIN MIXED No. 10—BEEBE.—A mixed bacterial vaccine (see New and Nonofficial Remedies, 1920, p. 295) marketed in packages of six 1 Cc. vials, each Cc. containing 500 million killed *B. acni vulgaris*, 1,000 million killed staphylococci albi and 500

million killed staphylococci aurei suspended in physiological solution of sodium chloride; also marketed in 10 Cc. vials and 20 Cc. vials. Beebe Laboratories, Inc., St. Paul, Minn.

ADALIN TABLETS 5 GRAINS.—Each tablet contains 5 grains of adalin (see New and Nonofficial Remedies, 1920, p. 63). Winthrop Chemical Co., New York.

VERONAL SODIUM TABLETS 5 GRAINS.—Each tablet contains 5 grains of veronal sodium (see New and Nonofficial Remedies, 1920, p. 84). Winthrop Chemical Co., New York.

NOVASPIRIN TABLETS 5 GRAINS.—Each tablet contains 5 grains of novaspirin (see New and Nonofficial Remedies, 1920, p. 248). Winthrop Chemical Co. (*Jour. A. M. A.*, Jan. 15, 1920, p. 179).

PHENETSAL.—SALOPHEN.—The salicylic acid ester of acetaminophenol. The actions of phenetsal resemble those of phenyl salicylate (salol). It acts as an antirheumatic, antipyretic, antiseptic and analgesic. Phenetsal is white, odorless and tasteless. It is almost insoluble in water.

SALOPHEN.—A brand of phenetsal complying with the N. N. R. standards. It is supplied as powder and as Winthrop tablets of salophen 5 grains. Winthrop Chemical Co., New York.

SALOPHEN.—A brand of phenetsal complying with the N. N. R. standards. Morgenstern & Co., New York.

CINCHOPHEN-CALCO TABLETS 7.5 GRAINS.—Each tablet contains 7.5 grains of Cinchophen-Calco (see New and Nonofficial Remedies, 1920, p. 225). Calco Chemical Co., Bound Brook, N. J.

PROCAINE-SQUIBB.—A brand of procaine (see New and Nonofficial Remedies, 1920, p. 29) complying with the N. N. R. standards. Procaine-Squibb is supplied as a powder, as hypodermic tablets procaine-Squibb three-fourths grains, and as solution tablets procaine-Squibb one and one-eighth grains. Squibb & Sons, New York.

GLOBULES BENZYL BENZOATE—H. W. & D.—Each gelatin capsule contains benzyl benzoate—H. W. & D. (see New and Nonofficial Remedies, 1920, p. 49) 5 minims, diluted with olive oil. Hynson, Westcott & Dunning, Baltimore, Md. (*Jour. A. M. A.*, Jan. 22, 1921, p. 245).

PROPAGANDA FOR REFORM

GLOVER'S CANCER SERUM.—In an envelope bearing the name "T. J. Glover, Research Laboratory, Toronto, Canada," but mailed, apparently from New York, physicians are receiving "literature" about Dr. Glover's Cancer Serum. This is stated to be a serum from immunized horses "between the ages of seven and nine years, of the roan type", and is claimed to have a specific action on every known type of cancer. The advertising offers to send the serum on receipt of price. While this would indicate that the Glover Research Laboratory had received a permit from the U. S. Public Health Service licensing the interstate sale of the serum in the United States, no such license has been issued (*Jour. A. M. A.*, Jan. 1, 1921, p. 52).

DIPHThERIA ANTITOXIN AND DIPHThERIA BACILL.—The well established curative properties of diphtheria antitoxin must not be confused with its possible value as a prophylactic against the disease. Attempts have been made to apply diphtheria antitoxin locally in the pharynx and nares with the hope of eradicating the objectionable micro-organisms that may have found lodgment there. Recent investigations to determine the effect of diphtheria antitoxin in preventing lodgment in and growth of the diph-

theria bacilli in the nasal passages of animals were entirely negative (*Jour. A. M. A.*, Jan. 1, 1921, p. 41).

PHARMACEUTICAL BARNUMS.—The exploiter of nostrums to the medical profession, realizing that at least a pretense must be made of giving the composition of medicaments offered to the physician, declares that his clay poultice has for its base "anhydrous and levigated argillaceous mineral". This sounds much more imposing than "dry and finely powdered clay", and satisfies by its very sonorosity. Now comes a product exploited chiefly to members of the dental profession, but also, it seems, to physicians. These are "activated" tablets which are "an anodyne, analgesic, febrifuge sedative, exercising (sic) antineuralgic and antirheumatic action". Their composition is stated to be "An activated, balanced combination of the mono-acetyl-derivative of para-amidophenetol together with a feebly basic substance in the alkaloidal state from the Thea-Sinensis". This means nothing more than acetphenetidin (phenacetine) and caffeine (*Jour. A. M. A.*, Jan. 1, 1921, p. 42).

ECHINACEA.—Intelligent members of the medical profession must be well aware that both the Pharmacopeia of the U. S. and the National Formulary include many products that can scarcely be justified as medicinal on the basis of scientific consideration. Among the products included in the National Formulary is the fluid extract of echinacea. In 1909 a report of the Council on Pharmacy and Chemistry denied echinacea a place in New and Nonofficial Remedies because there was no evidence to show that it possessed therapeutic value. Despite this, echinacea is used extensively. The fluid extract and the tincture are made in enormous quantities, and the root enters into the composition of a large number of "patent", proprietary and non-secret mixtures. For this reason Couch and Giltner of the U. S. Bureau of Animal Industry made an extensive experimental study of echinacea therapy. Animal experiments designed to determine whether the drug possessed the properties that are ascribed to it gave negative results in every instance (*Jour. A. M. A.*, Jan. 1, 1921, p. 39).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Dermacilia Eye Remedy and Ointment (The Dermacilia Manufacturing Co.), the first falsely claimed to be an effective treatment and cure for sore eyes of all forms, the second falsely claimed to be effective for all skin and scalp affections and for all kinds of eczema. Roger's Liverwort, Tar and Canchalagua (Williams Manufacturing Co.), falsely and fraudulently recommended for treatment of consumption, asthma, whooping cough, influenza, etc. Valesco (Alhosan Chemical Co.), falsely and fraudulently recommended as a remedy for tuberculosis, asthma, pneumonia, etc. (*Jour. A. M. A.*, Jan. 1, 1921, p. 52).

SERUMS AND VACCINES IN THERAPY.—In the development of serums and vaccines, scientific investigation and experimentation have preceded clinical tests of those products which have proved of permanent worth. Whenever the clinical use of serums and vaccines has proceeded beyond well established facts determined by laboratory research, the result has usually been disappointing. To submit a serum or vaccine for clinical trial without successful preliminary laboratory investigation of its probable worth is an imposition on the profession. The success of diphtheria antitoxin and antityphoid vaccine has prejudiced the profession and public in favor of vaccines and serums so that they are willing to accept a new serum or vaccine simply because it is a serum or vaccine. In his introduction to a series of articles

on serum and vaccine therapy which is now being published by the Council on Pharmacy and Chemistry, Flexner points out that in only a few instances has the anticipation been realized that a curative antiserum for each disease would be discovered. The history of antipneumococcus serum affords a striking example of the difficulties and pitfalls that are encountered in the development of remedies of this class. Thus far only one therapeutically active serum, Type I, has been developed, and this serum is not effective against infections by other types of pneumococci. Despite this, we are being offered today for clinical use "polyvalent" antipneumococcic serums recommended by the makers for the use in all types of pneumococcus infection (*Jour. A. M. A.*, Jan. 8, 1921, p. 115).

INHALATION THERAPY.—The possibility of effecting absorption of many drugs, other than the anesthetics, by inhalation is beyond question. Mercury, for example, has been so administered. The difficulties that attend such a procedure relate in particular to the uncertainties of accurate dosage. It has lately been demonstrated that calcium chloride solutions can be nebulized for inhalation so that the salt is absorbed from the respiratory tract. Since absorption of calcium from the alimentary tract is slow, indefinite and undependable, while subcutaneous or intravenous administration is objectionable or impracticable or both, attention becomes directed to the inhalation method of administering calcium. However, while small quantities of calcium are of dubious value, recent investigations indicate that the administration of larger amounts by inhalation methods is liable to exceed the limits of advisable concentration in the blood without any suitable mode of regulation. These findings may be a timely warning at a period when therapeutic novelties are likely to be proposed in increasing numbers (*Jour. A. M. A.*, Jan. 8, 1921, p. 116).

MORE MISBRANDED VENEREAL NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities on the ground that the curative claims made for them were false and fraudulent: Saxon Gonorrhea Injection (Saxon Co.), represented as a treatment, remedy and cure for gonorrhea, gleet and the prevention of stricture. Santalets (Sharp & Dohme), represented as a treatment, remedy and cure for gonorrhea, gleet, catarrh of the bladder—acute or chronic—whether due to gonorrheal infection or other causes. Specific Globules No. 37-77 (Sharp & Dohme), claimed to be an improved combination for the treatment of gonorrhea and its complications. Methylets (Sharp & Dohme), claimed to be of great value in all forms of urethritis, especially gonorrheal and allied varieties. Saxon Methygon Tablets (Saxon Co.), claimed to be a reliable remedy for treating gonorrhea and gleet. Columbia Short Stop (Columbus Drug Co.), recommended for "gonorrhea, gleet, running range, inflammation of the kidneys and bladder". Allan's Compound Extract of Sarsaparilla with Iodide (Allan-Pfeiffer Chemical Co.), claimed to be the best known remedy for syphilis, a powerful purifier of the blood and to have other curative effects. Bonkocine (J. E. Gasson), sold with the claim that "well defined cases of gonorrhea yield to treatment in one to five days, chronic gonorrhea and gleet in five to ten days, provided they are not complicated with stricture or enlarged prostate gland" (*Jour. A. M. A.*, Jan. 8, 1921, p. 126).

TONA-VIN.—To those familiar with nostrum advertising, the advertisements which have appeared in newspapers for "Tona-Vin" made it fairly easy to classify the product as probably belonging to the

class of alcoholic nostrums that are being born over night in order to meet—or beat—the exigencies of the prohibition law. According to the label the preparation contains "soluble iron and quinine, fluid extract of senna leaves, wild cherry and aromatics". The A. M. A. Chemical Laboratory analyzed Tona-Vin and reported that it is a dark-brownish liquid having an odor like wild cherry and wine and a slightly bitter, somewhat sour taste. The presence of 18 percent of alcohol is declared on the label. The analysis demonstrated that the amount of quinine was so small that, to obtain a single tonic dose of quinine, it would be necessary to drink the contents of about 1.4 bottles of the preparation. The chemists further found that, to obtain an average dose of iron, the individual would be obliged to drink the contents of an entire bottle of Tona-Vin. When one ounce was dealcoholized and swallowed by a healthy man, no effect except a doubtfully laxative action was noted. Evidently Tona-Vin is not sufficiently medicated to prevent its use in moderate amounts as beverage. There is, of course, no legitimate reason for administering such drugs as iron and quinine and senna, in ridiculously small doses, in a menstruum containing 18 percent of alcohol (*Jour. A. M. A.*, Jan. 15, 1921, p. 193).

POLYVALENT VACCINES FOR COLDS.—At least five commercial manufacturers of biologic products make and push the sale of vaccines to prevent colds. Of these at least two, from time to time, have added new strains of bacteria to the formulae with which they originally introduced their products, so that seventy-five or eighty different types of bacteria are now included. Every year different types, varieties and species of bacteria have been associated with colds in different parts of the country. Presuming—although it has never been proved—that any vaccine has value in preventing colds, the logical thing to do is to prepare a specific vaccine for each form of cold in each part of the country. Commercially, it is much more profitable to mix all the bacteria together, to prepare a vaccine and to inject this into the patient in the hope that some organism will produce antigens which will find their mates. The present day shotgun biologic mixture is more ridiculous than the old shotgun proprietary—and a greater menace to public health and to scientific medicine (*Jour. A. M. A.*, Jan. 15, 1921, p. 182).

SPIROCID NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Spiroicide is advertised as a new and successful treatment of syphilis by fumigation and inhalation. The product is furnished in the form of tablets which are stated to be composed of metallic mercury, copper sulphate, cypress cones, henna, nutgall and dried pomegranate. Experiments in the A. M. A. Chemical Laboratory showed that when the tablets are ignited the organic constituents are consumed, the mercury is volatilized and most, if not all, of the copper remains behind. For use, the patient sits on a chair, the tablet is ignited, and the patient is covered with a sheet so that he will inhale the mercury vapors produced. The Council obtained the opinion of syphilographers with regard to the evidence submitted by the Spiroicide Corporation, which markets the product, and as to the advisability of giving recognition to a method for the administration of mercury by inhalation. In consideration of the opinions expressed by its consultants, the Council declared Spiroicide inadmissible to New and Nonofficial Remedies because, first, the claims made for it are unproved and unwarranted; secondly, the routine use of an inexact method for the administration of mercury is detrimental to sound therapy; and thirdly, the name is not descriptive of the composition, thus failing to remind the physician

who uses the pastils that he is administering metallic mercury (*Jour. A. M. A.*, Jan. 22, 1921, p. 259).

HELMITOL OMITTED FROM N. N. R.—Helmitol is hexamethylenamin methylencitrate. It was introduced with the claim that it was superior to hexamethylenamin (which acts in acid fluids only) in that it is equally efficient whether the urine is alkaline or acid. In 1918 the Bayer Co., which then marketed the product in the United States, was notified that the Council on Pharmacy and Chemistry questioned the claims and desired evidence for their substantiation. In 1919 the same notification was sent the Winthrop Chemical Co., which in the meantime had secured control of the product. Pending the submission of evidence, the Council continued Helmitol in New and Nonofficial Remedies with the statement that the action and uses were those of hexamethylenamin. Now the Council on Pharmacy and Chemistry announces that Helmitol has been omitted from New and Nonofficial Remedies for the reason that the claims under which it was introduced have been disproved by P. J. Hanzlik, who demonstrated that the alkalinity required to split off formaldehyd from helmitol is greater than exists in urine, even in the advanced ammoniacal fermentation (*Jour. A. M. A.*, Jan. 22, 1921, p. 260).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Benetol Suppositories (Benetol Co.), misbranded in that unwarranted therapeutic claims were made for them. Vinol (F. Stearns & Co.), misbranded in that false and fraudulent claims for curative effects were made for it. Mir-A-Co (Mir-A-Co Co.), sold with false and misleading statements regarding its composition and with fraudulent therapeutic claims. Novita Globules; Novita Capsules; Novita Salve, Stainless; Novita Salve, Brown (Novita Co.), misbranded in that the therapeutic claims were false and fraudulent. Pepsolaxatone (Burlingame Chemical Co.), adulterated in that it did not contain diastase or pancreatin as claimed and that the therapeutic claims made for it were false and fraudulent. Alkano (Alkano Remedy Co.), offered under false and fraudulent therapeutic claims (*Jour. A. M. A.*, Jan. 29, 1921, p. 326).

BIOLOGIC THERAPY.—The various problems, the contradictory opinions and the commercialization of biologic therapy, induced the Council on Pharmacy and Chemistry to appoint a committee to prepare and publish an authoritative review of this subject. The object of the series, which has now been published, was to present to physicians concise, authoritative statements concerning indications, contraindications, methods of administration, dosage, value and possible danger of serums, vaccines and non-specific proteins in the treatment of infectious diseases (*Jour. A. M. A.*, Jan. 29, 1921, p. 318).

FOREIGN PROTEIN THERAPY.—While striking clinical changes, sometimes to the apparent profit of the patient—but sometimes decidedly otherwise—may follow the injection of foreign protein, it is generally agreed that the method lacks the requisite amount of carefully controlled observations which would entitle it to acceptance as an approved procedure for general use. Most serious is the attempt of pharmaceutical houses to push the use of alleged specific methods of treatment, which the thinking physician will at once realize are methods of inducing protein shock. Research with such products in laboratories and in hospitals under suitable control may be permissible, but indiscriminate use in general practice is a far different matter (*Jour. A. M. A.*, Jan. 29, 1921, p. 315).

BOOK REVIEWS

CRILE AND LOWER'S SURGICAL SHOCK (Second Edition of "Anoci-Association")—Surgical Shock and the Shockless Operation Through Anoci-Association. By George W. Crile, M.D., Professor of Surgery, School of Medicine, Western Reserve University, Cleveland; and William E. Lower, M.D., Associate Professor of Genito-Urinary Surgery School of Medicine, Western Reserve University, Cleveland. Second Edition of "Anoci-Association" Thoroughly Revised and Rewritten. Octavo of 272 pages with 75 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$5.00 net.

This new edition of Dr. Crile's most interesting observations upon the subject of anociation has been fortified by the rich experience afforded by the great war. The results thereof have surely met all the expectations of the originator of this fascinating theory and have served to establish the soundness of anociation as a working principle in conservative surgery. One cannot read the book without becoming quite enthused over the subject and largely because of the great amount of experimental data offered in corroboration of the premised theories.

The arrangement of the book is both gratifying and practical, particularly so the chapter on transfusion since Dr. Crile, one of the pioneers in and ardent advocate of the direct method now endorses the indirect, citrated method as the one of choice.

In the chapter on anesthesia the authors again present their plea for the more general use of nitrous oxide, inasmuch as it has proven in their experience almost a specific against shock.

All surgeons will be intensely interested in this book.

ORTHOPEDIC AND RECONSTRUCTION SURGERY, INDUSTRIAL AND CIVILIAN. By Fred H. Albee, M.D., F. A. C. S., Professor and Director of Department of Orthopedic Surgery at the New York Post-Graduate Medical School and at the University of Vermont. Octavo volume of 1138 pages with 804 illustrations. Philadelphia and London; W. B. Saunders Company, 1919. Cloth, \$11.00 net.

Such has been the progress made in this hitherto much neglected field of medicine and surgery that the appearance of Dr. Albee's comprehensive treatise is both timely and gratifying.

Despite the author's many achievements in the operative field of orthopedics he has, nevertheless, not failed to incorporate in his book the well-proven principles of medicine dependent for their elucidation upon a comprehensive study of the essential branches, anatomy, physiology, bacteriology and immunology, pathology, and the various methods of non-operative treatment, including hydro- and electro-therapy, massage, vaccine therapy, etc. A condensed and interesting resume of Billing's and Rosenow's work on focal infection and its relation to the various arthropathies, is included.

The technique and results of Dr. Albee's extensive autogenous bone inlay work are given in considerable detail. This method of treatment of Pott's disease of the spine certainly seems destined to supplant all others in properly selected cases, for one cannot follow the splendid results obtained by it without becoming convinced that heretofore there has been no form of treatment the results of which can compare with those now obtainable by the spinal graft.

Unfortunately there are a few typographical errors which in future editions will doubtless be eliminated in this otherwise most satisfactory and comprehensive treatise on orthopedic and reconstruction surgery.

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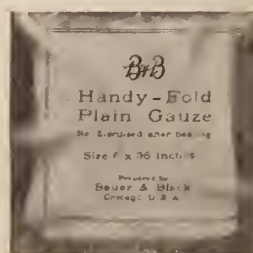
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Next Annual Session, Indianapolis, September 28, 29 and 30, 1921

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ORIGINAL ARTICLES

DIAGNOSIS AND TREATMENT OF DISEASES AND INJURIES OF THE SPINE*

DR. GEORGE D. MARSHALL
KOKOMO, INDIANA

In presenting this subject there will be no attempt to go into the literature or to theorize upon untried methods of diagnosis or treatment, relying for data on the personal experiences of the writer and reliable data acquired by association with orthopedic surgeons who have noted the progress of orthopedic surgery for years. While in the main the paper will speak of Pott's disease, other conditions will be mentioned, mainly for the purpose of bringing out points in differential diagnosis.

The plea of the paper is for a more frequent diagnosis of Pott's disease in the earlier stages of the disease, a time when the diagnosis is more difficult to determine but when treatment is of so much more benefit in preventing deformity and constitutional symptoms. Special emphasis will be laid on methods of diagnosis that are not new but too seldom put into application, thereby causing many of the cases to go without a diagnosis until the deformity makes the condition apparent to the casual observer and the advantage of early treatment is lost.

Patients with disease of the spine apply for relief from pain, impaired function, deformity, or a combination of these symptoms. However, many patients with Pott's disease complain so much of nervousness and fatigue that the pain in the back may be mentioned in a negligible way and only brought out by close questioning, thus causing the spinal lesion to go undetected. Pain in the back may be the result of many conditions and among the acute infections causing back pain may be mentioned follicular tonsilitis, smallpox, typhoid fever, myositis, etc. These and similar causes may be recognized by the short duration, usually lasting but a few days. Pain due to neuritis can be detected by palpation of the cutaneous nerves, pressing the nerve

against the rib, and mapping out the localized irritation. The occurrence of herpes zoster often uncovers the cause of pre-existing pain. Pain due to trauma of the soft parts is usually of short duration, shows evidence of trauma by swelling and discoloration, yields readily to counter-irritation and rest. Pains complained of by the neurasthenic are indefinite in location, the patient not being able to locate the pain twice in the same place when palpation of the spine is used to detect it. Pain due to fracture gives rise to point tenderness that is clearly localized, persistent in character until immobilized, the extent of the paralysis governed by the location of the fracture, and amount of hemorrhage into spinal canal. Chronic low back pain may be caused by muscular insufficiency, most often seen in women who have pendulous abdomen, and a disturbance in weight-bearing alignment. In these cases the muscles have not the power to afford the support required to keep the bony structures in proper alignment.

Subluxation of the lumbo sacral articulation is a frequent cause of low back pain. This segment of the spine is very frequently the site of periosteitis, where acute strain plus focal infection is very prone to cause organization of inflammatory exudates and give rise to spurs and rough bony processes that are the cause of pain, especially after exertion or in changeable weather, similar to any joint which is the seat of chronic arthritis. Disturbance of weight-bearing alignment, as caused by a short leg, and the resulting compensatory scoliosis, renders the lower spine very prone to periosteitis. Pyorrhea and acne vulgaris are contributing causes to stiff and sore backs. I have observed several cases where there was distinct connection between acute infection of the respiratory tract and accessory sinuses, trauma, periosteitis, and the formation of inflammatory exostoses of the lumbar vertebra, resulting in chronic back pain and impaired function. Impaired function is the result of both pain and deformity and need not be discussed separately. Deformity may be due to disease of the vertebral column, to a paralysis of the muscles, improper weight bearing

*Presented before the Indiana State Medical Association at the South Bend session, September, 1920.

alignment, disease of the hip joint, or to a postural defect the result of habit or vocation.

Examination can be made properly only where the whole back without clothing is available for inspection, so that the examiner can note any deviation from the normal curves of the spine. The absence of the normal curves, as seen in the straight stiff backs, is of as much importance as pronounced curvature. Stroking with the finger down the spinous processes will make a red line over them that is an aid in determining any deviation. After inspection the patient should be required to bend the body laterally, with the pelvis maintained on a level, bending slowly, first to one side and then the other, while the examiner notes any rigidity of any segment of the spine which can be seen as a break in the regular curve. Rigidity of a very short segment of the spine can be detected in this way. Requiring the patient to bend forward will show any deviation from the normal contour by an acute break in the normal curve, and segments in kyphosis or depression may be noted. Forward bending also gives a comparative idea of the mobility and strength of the back, noting any absence of the normal curves, or whether the patient crawls up his legs with his hands in assuming the upright position. The test for dorsiflexion is best made by having the patient lie face downward, allowing the thighs to remain on the table while raising the shoulder and encouraging him to allow the back to sway downward as much as possible, so that any rigidity to dorsiflexion can be detected readily. Postural defects disappear when the spine is bent, particularly in forward stooping, and is a very important means in differentiating postural defects from organic disease of the spine. Where deformity is due to paralysis there is increased mobility.

Examination of the legs for shortening is of great importance as the spinal deformity may be compensatory; a leg one inch short causes a rather marked scoliosis, "and many people have a difference of an inch in the legs, that have never had fracture or other known bone lesion". A leg one inch short causes so much back strain that it is incompatible with continued effort, especially walking and bearing a load, unless the shortening has been corrected. Immobilization or dislocation of a hip is also a cause of spinal curvature, usually in lordosis.

Pott's disease is of considerably more frequent occurrence than is recognized generally by medical men, and very often overlooked as a cause of disability. Sufferers from this disease often complain more from nervousness and fatigue than from pain in the back, and may have symptoms pointing to an abdominal condition, due to the spondylitis causing irritation

of the nerves that leave the spinal canal at the point the vertebræ are breaking down.

These conclusions have been reached after examination of a large number of men in army camps, discharged soldiers, and patients in private practice. One potent reason for the frequent observance of tuberculous spine in the army was the radical change in the physical habits of many of the recruits. The man with a weak back usually followed some vocation in civil life that did not call for active physical exertion, and carried a mild or arrested Pott's without any great discomfort. Under the influence of intensive training there was a flaring up of these arrested infections, the process becoming active and in many instances deformity rapidly ensuing, with complete disability. Acute infectious diseases, particularly measles, played an important role in the flaring up process. This I have been able to observe frequently, and am led to believe that measles play an important role in exciting bone tuberculosis.

Trauma is the greatest factor in exciting Pott's disease, and a history of trauma can be obtained in practically every case. It may have been a fall down stairs; the patient may have been thrown from a horse, or direct violence may have been the cause. The immediate result of the trauma may have been of short duration, and the development of Pott's disease occurs some time later. Severe muscular exertion and the trauma incident to it frequently causes a flaring up of latent or arrested tuberculous spine, as was frequently observed in the case of soldiers. Many of these men had been in hospitals a number of times with a diagnosis of myositis, or some similar condition, and under the influence of rest in bed would feel better for a time, only to have a recurrence of back trouble after going back on duty, until a diagnosis would be made. Bone tuberculosis was incompatible with military duty, and I observed a number of cases that flared up under the influence of intense training, with resulting deformity and disability. Some of these cases will be discussed as the x-ray slides are shown. The number of cases of tuberculous spine is quite considerable among the ex-service men. Many of them give a definite history of trauma, and the carrying of the heavy pack by a man with an arrested Pott's was very likely to cause the process to become active.

One case referred to me in July, with a tentative diagnosis of gall stones, gave a history of pains in the back, in the lower dorsal region, since 1901. He was a Spanish-American war veteran, and had done duty in the Philippines, Cuba and China. He stated he was unable to do setting up exercises properly, especially lateral bending, and remembers being reprimanded on that account. He had night sweats until

seven years ago, and had reacted to the tuberculin test before his discharge from service. He had been treated for syphilis, and on various other diagnoses without relief. The Wassermann test always had been negative, and there was no history of initial infection. Physical examination showed a slight deformity of the lower dorsal spine in kyphosis, with rigidity of this segment of the spine, and an apparent shortening of the trunk. The x-ray findings were typical of old tuberculous process, with complete fusing of the vertebræ. This man has gone on for nineteen years with Pott's disease without diagnosis, and yet the physical and x-ray findings were typical.

The reading of case histories is a tiresome process to both reader and audience, and I will desist from this procedure and again call attention to the prime factors in making a diagnosis. Careful history of the patient, especially regarding trauma to the spine which may have occurred some years previous. Inquiring into the existence of hacking cough, continued colds, night sweats, hectic fever, and other signs of tuberculous process. Pain in the back after exertion. Careful examination of the spine by inspection of the whole back. Examination for rigidity of the spine, by requiring lateral bending, stooping, and dorsiflexion. Palpating for acute deviations in the spinal processes.

The x-ray plate in Pott's disease shows obliteration of the intervertebral disks, fusing of the vertebræ, and various degrees of curvature, and often evidence of periosteitis or abscess. Also gives definite information in the case of fracture. Periosteitis and spur formation give a conclusive x-ray finding.

It would be impossible to go into details concerning treatment, but I wish to call attention to the value of heliotherapy, by exposure to the sun's rays, and the application of braces. Heliotherapy is carried out by having the parts exposed to the direct rays of the sun, beginning with 15 minute exposures, and increasing the length of the exposure 5 minutes daily to establish tolerance. Exposure must be made in the open air, as glass filters the rays and robs them of much therapeutic value. Heliotherapy is of great value in treating abscess and sinus formation. Frequently rapid healing of a sinus will occur, leaving a pliable scar.

In the application of braces the effort is made to secure immobility with the spine in dorsiflexion, so the superincumbent weight is thrown on the articulating facets of the vertebræ, and taken off the bodies of the vertebræ, allowing the bodies to heal without deformity. In applying braces a proper fit is absolutely necessary to the comfort of the patient, and to accomplish results from the treatment. The brace to be removed

while the patient is lying down or taking sun baths.

A plaster of paris form should be made over the patient's body, while the patient is suspended by a tripod and halter, making enough extension to correct as much deformity as possible, while the form is being made. This only requires that the super-incumbent weight above the lesion be relieved, and does not require suspension of the whole body. The skin is covered with soap, a stout cord placed in the median line in front, and the plaster bandages applied to form the desired manikin. After the plaster has partially set, it is cut down the front with a plaster knife, using the cord to protect the patient from the knife. Before the plaster is too hard the manikin can be removed, as one would remove a vest, the cut edges apposed, and few encircling bandages applied to keep the manikin in shape until thoroughly dry. The brace can be fit over this form and a perfect fit assured, by allowing for the thickness of the plaster, and attention to the further correction of deformity desired. An attempt will be made to make this procedure clearer by the demonstration of lantern slides.

DISCUSSION

DR. J. C. FLEMING (Elkhart): I think a few of these cases of lesion of the spinal cord are syphilitic. I have seen two or three perhaps in the last two or three years which were apparently gummas, probably of the dura. In these cases the patient had most intense pain, much more intense than the tubercular lesions, and they also had increase of reflexes, and they had spasms of the muscles of the legs; the legs would draw up and the patient would cry out with pain. Examination showed a positive Wassermann, and antisyphilitic treatment cured them.

Another thing we must remember, that secondary carcinoma of the spine is not a rare thing in people over fifty. A woman operated for cancer of the breast, for instance, several years later was taken with spinal symptoms which proved to be malignant metastasis of the body of the vertebræ. In the male that is very common following malignancy in the prostate.

The doctor showed two or three so-called broken backs. I think we can summarize the treatment of broken backs in this way: So-called broken backs, fracture of the vertebræ, should not be operated on unless they are on a level with the *cauda equina*. In other words, if at the time the injury is received that cord is depressed, the operation will not do any good, though where the nerve fibres are medullated they have a power of regeneration and an operation is sometimes indicated.

Another thing is that it is absolutely impossible at the time of the injury to tell how much

improvement a patient will make. In the first place, about eighty percent of them die immediately, the injury is so great that they die from the effect of it. Of the other twenty percent a large number die in a few days. A small percentage go on and live with a paraplegia for months or even years, but of that small percentage it is impossible to determine how much improvement they will make. And they often improve for several years, perhaps five or six after the injury, so that in a case of broken back we cannot make a prognosis as to just what is going to happen. Sometimes they regain considerable power in the spinal cord. Doctor Duemling just told me of a case in which a man with fracture of one cervical vertebra had complete paraplegia but lived and finally regained partial use of the muscles below this level.

In regard to x-ray of the spinal column, we must bear in mind that we cannot determine much about the fifth lumbar vertebra. If you examine one hundred x-ray plates of the spine showing the fifth lumbar vertebra it is surprising how many will appear pathological, and it is very difficult to draw any conclusions from the fifth lumbar vertebra because it so frequently appears pathological even when the patient presents absolutely no symptoms.

DR. GRACE LINE HOMMAN (Laporte): I am especially interested in Doctor Marshall's paper because I have found in the course of general examination that an arthritis of the spine is rather common, much more common than one would expect. When I was in Rochester in 1918 I picked up about ten cases of arthritis of the spine in less than one year. If one is on the lookout for it one will recognize it more quickly than otherwise. One patient I remember particularly gave a history of having had so-called "rheumatism of the hips" twelve years before. She had never had her clothes removed for a complete examination. The x-ray showed complete ankylosis of the spinal column.

As to the etiology, it is very difficult to say if the condition is tuberculous or of an infectious nature. My experience, which is perhaps limited, has been that every case of arthritis of the spine should be regarded as tuberculous until it is proved otherwise.

Another thing is, that treatment must begin early. Sometimes just simple rest in bed for a few weeks will cure the patient. But if the disease is allowed to progress, then it nearly always means fixation of the spine.

Taking the history is of prime importance in making a diagnosis, and one question I ask the patient is, "Can you put on your shoes? Do you have difficulty in turning over in bed? Do you have pains down your legs?" Nearly always

he will say "Yes, I am unable to get my shoes on." That is a simple way of diagnosing it, but you will invariably find upon examination that there is considerable rigidity of the spine.

I am much interested to know what effect radium would have on these cases of tuberculous spine. Iselin has reported 800 cases of tuberculous osteo-arthritis cured by x-ray. Radium being more powerful I am wondering if it would not have just as beneficial effect. I would like to see some cases tried out with that treatment.

DR. GEORGE D. MARSHALL (Kokomo): I did not discuss lesions of the spinal cord, but of the spinal column.

With reference to the fifth lumbar vertebra, I do not think there is any difficulty about telling pathology by the x-ray. There are a great variety of anatomical constructions, it is true, but there should be no difficulty in differentiating anatomical defects from those produced by pathology. A periosteitis should not be considered as an anatomical defect. By taking the x-ray at the proper angle you can tell about the position, and I think arrive at conclusions very definitely. I had some interesting experiences in the army. One young officer who had arthritis in the lumbar region was accused of malingering simply because his case had not been gone into thoroughly. I think periosteitis of the lumbar vertebra is a common occurrence, but these people get absolute relief when they get proper immobilization. Many are due to focal infections—of the nasal accessory sinuses, plus traumatism.

THE DUTY OF THE STATE TO THE EPILEPTIC*

W. C. VAN NUYS

INDIANA VILLAGE FOR EPILEPTICS

NEWCASTLE, INDIANA

The program this afternoon contains two papers on the general subject of epilepsy by members of the staff of the Village for Epileptics. This is indicative of the interest of the medical profession of the state in what has been called "the most mysterious disease of human history". Moreover, it indicates your interest in the state institution for epileptics at Newcastle. You are interested in what has been done there and in our plans for the future. We hope to make this institution the best one of its kind in the world and we want your suggestion, criticism and hearty co-operation.

The physician in private practice and the

*Read before the Indiana State Medical Association, South Bend, Indiana, September 23, 1920.

institutional physician have different problems and different viewpoints. The former sometimes accuses his institutional brother of routine work, lack of interest in new theories concerning epilepsy, lack of appreciation of the broad community problems presented by this special class. Possessing the great advantage of early observation of his patients, he sometimes fails to note the epileptic characteristics and early signs of deterioration and relies almost entirely on the frequency and severity of seizures as indications for prognosis and treatment.

He is sometimes at a loss to account for the extremely guarded prognosis of the institutional physician who learns to measure the possibilities in a given case by study of the patient when he is at his best, that is, in the inter-paroxysmal state.

An exchange of viewpoints in papers and discussions of this kind is helpful and will enable one to better understand the problems of the other.

The literature of epilepsy is enormous and conflicting. It is true that the symptomatology has been carefully worked out and is fairly well known, but the standard text books have hardly kept pace with the really notable studies of periodic mental states known as epileptic equivalents and allied conditions. Sanit, Krafft-Ebing, Pick, Turner and others have thrown much light on these obscure phases of epilepsy. One somehow gets the impression that much of our book knowledge concerning epilepsy has been handed down without question from an earlier day. Much of the literature is descriptive and historical and discloses, on comparison with the literature of syphilis, cancer and tuberculosis, a lack of research work.

On the other hand, current medical literature abounds with theories as to the cause of epilepsy and articles on special phases of the subject. Here the student is bewildered by the nomenclature. He finds that the terms essential epilepsy, idiopathic epilepsy, true epilepsy, affect epilepsy, etc., are used with different meaning by different writers. The word epilepsy is used by some to indicate a group of cases with a certain definite pathology, but most writers do not use this unqualified term. They refer to the many conditions encountered in a study of the chronic convulsive disorders as "The Epilepsies".

The terms idiopathic, essential, or genuine epilepsy were formerly applied to these cases where the cause could not be ascertained. This implied that the cause was known in the so-called symptomatic epilepsies. It was assumed that associated developmental defects, trauma, syphilis, etc., were responsible for the seizures. However, many individuals suffering from such

defects, injuries and diseases do not have seizures and there are points of similarity in the individual make-up and course of the disease in these two groups. There is a tendency at the present time to limit the terms essential and genuine to those cases of epilepsy possessing what has been called the primary epileptic constitution and certainly there are groups formerly classed as symptomatic that can be so classified.

Many physicians even at the present time depend upon the seizure type for a diagnosis of epilepsy. It is not strange that such a great diversity of opinion exists in the absence of a definite etiology and pathology. The integrity of epilepsy as a distinct disease must depend on the discovery of common etiological or pathological factors. At the present time the association of the various chronic convulsive disorders is on a symptomatic basis.

In 1912 an effort was made to interest a great medical foundation in research work in epilepsy. The reply was that the subject was too broad, that many factors probably entered into the causation and that there was no point from which to start. The refusal was qualified by an offer to work out any promising leads that might be developed.

For the present we cannot exclude certain widely separated factors from the etiology of epilepsy and must agree with Shanahan that the phenomena of epilepsy are the evidences of reaction of a certain type of make-up to certain psychogenic, chemotoxic or endocrinopathic factors working separately or together. To quote Coriat, "We are dealing with a disorder of unknown nature, periodic in type, although the exact origin of periodicity is not known, and manifesting itself sometimes as a motor disturbance, sometimes as a sensory reaction and sometimes as an interruption of consciousness."

The most interesting and notable contributions to the study of epilepsy during the last ten years have been those of the psycho-analysts. The chronic epileptic possesses many unsocial and anti-social characteristics. This has been a matter of common knowledge for years. Dr. L. Pierce Clark of New York believes that certain peculiar character traits antedate the appearance of seizures and most frequently date from birth. These traits are supersensitiveness, egocentricity, emotional poverty, lack of power of adaptation. Many individuals with the above traits are self-assertive, shallow in their affections, indifferent to the rights of others. To such a make-up Dr. Clark applies the term "potential epileptic character", although he admits that many individuals possessed of these traits do not progress to true seizures. Dr. Clark believes that we should watch carefully for these "potential epileptics" and that a diagnosis of

epilepsy after the first grand mal attack is comparable to a diagnosis of tuberculosis after the formation of tuberculous cavities in the lungs. It is true that all of us possess some of these traits in greater or less degree. It is equally true that such a combination of traits, if encountered in marked degree, should be looked upon with suspicion by the physician. Because it reveals our responsibility and the possibility of early diagnosis and treatment this must be considered as one of the notable contributions to the literature of epilepsy.

The fully developed epileptic has a well defined personality and observations taken during the inter-paroxysmal period are giving us different conceptions of the nature of the disease. There is a gradual reduction in intellectual capacity which may lead to profound dementia. In milder degrees of intellectual impairment there is slowness of thought, difficulty in understanding new ideas and following the thought of others. There is more or less loss of memory with narrowing of the field of interest. The confirmed epileptic is wrapped up in himself. It is surprising how few contacts he has with the outside world. He is very much interested in matters concerning his own comfort and convenience. Trifles irritate him. Loss of relatives does not greatly concern him unless their loss affects his support or comfort. He is incapable of love in the deeper meaning of the word because he is too selfish and interested in considerations of self-love. He is, in a way, ambitious. He has confidence in his ability and is not easily discouraged. He has faith in himself and hope for the future. Few epileptics commit suicide because of this trait. When left alone he rarely commits acts of violence, but in the ordinary contacts of life he displays irritability and the slightest interferences with him may cause outbursts of violence. He has no insight as to his condition. He cannot be depended upon, more because of his peculiar characteristics than because of his occasional seizures. People shun him and he is thrown back on himself and made to lead a life of seclusion when what he needs is to have his feelings and energies directed away from himself. That the epileptic is a misfit in the community is well known to physicians and social workers. It is well known also to twenty-five or thirty thousand relatives of more than five thousand epileptics in Indiana. The presence of an epileptic in any family is demoralizing. When there are other children in the family the situation is made worse.

Bullard says that the highest proof of civilization is the care shown for the weak, disabled and unfit. No state program for the care of the diseased or unfit can get far ahead of public opinion and the physician can do more than any

other to teach the public its duty towards the epileptic.

So far as it can do so it is the duty of the state to relieve the handicaps of the epileptic, and this should not be done in a spirit of charity. The epileptic is a citizen. As a citizen he has a right to an education. The responsibility of the state is not decreased because of the disability of the individual. He is entitled, also, to a training that will fit him to be less of a burden. If he cannot obtain these things in the public schools, it is the duty of the state to provide them elsewhere so that his happiness and usefulness may be increased.

When I say it is the duty of the state to do these things I speak advisedly for the state of Indiana, following the lead of seven states, assumed that obligation by legislative enactment in 1905 in the following words: "There shall be established in this state a Village for Epileptics, the object of which shall be the scientific treatment, education, employment and custody of epileptics. In the establishment of this institution the General Assembly recognizes the duty of the state to provide proper care for such of its citizens as are, or may become, affected with the disease of epilepsy."

That is the law. It should be a matter of state pride that public opinion in Indiana demanded this legislation within thirteen years of the establishment of the first separate institution for epileptics in this country.

The state recognizes its duty. No assumption of duty could be plainer. Note the order in which the objects of the institution are given: the scientific treatment, education, employment and custody of epileptics. The duty of the trustees and superintendent is here clearly set forth. Nothing could be plainer. Nothing remains but to secure appropriations to carry on the work.

The Village for Epileptics is located about two miles north of Newcastle on a beautiful tract of 1,337 acres. This tract extends approximately two miles east and west and one mile north and south. A river valley three-fourths of a mile in width extends from north to south. A range of hills, approximately seventy-five feet above the valley level, extends from north to south. Our plan is to use this valley in the separation of the sexes and to erect on either side of the valley three groups of buildings for patients. Thus, there will be six distinct groups of buildings, three for males and an equal number for females. The plans call for the erection of plain, simply constructed buildings and the units are small to aid in classification and to emphasize homelike features. The institution as planned will ultimately care for about 1,250 patients and has grown rather slowly to the present capacity of about 460 male patients. A

start has been made in each of the groups for male patients. No buildings for females have been erected. An appropriation of \$275,000, made in 1919, is now available for that purpose. This appropriation as originally made was for twelve buildings, a certain amount for each building of a definite capacity each, and the increased cost of labor and material made it impossible to build. The recent special session of the General Assembly continued the appropriation with a provision that we should build and equip as many of the buildings as could be constructed within the appropriation. Plans are ready and work will begin early next spring.

In making requests for appropriations we have not failed to ask for those things that would enable us to carry out the intent of the law. The institution as planned will provide a hospital building and a separate receiving building for each sex, a medical building containing medical library, research, clinical and x-ray laboratories, postmortem room, clinic room and beds for patients under temporary observation. A school building and gymnasium for each sex and industrial buildings for each sex for occupational therapy have been planned and requested.

In a general way, it may be said that the General Assembly has been liberal in making appropriations for this institution.

It has been less difficult to get appropriations to increase the capacity of the institution than to extend its activities in other lines. For years we have asked for a hospital building on the male side, a school building and an industrial building for boys and the above mentioned medical or laboratory building. We are just now completing and equipping the hospital and industrial buildings, but have been unable so far to obtain appropriations for the medical and school buildings. This is unfortunate and is not in accord with the intent of the law.

Every patient committed to the Indiana Village for Epileptics is entitled to the best in diagnosis and treatment. Individual attention, education, congenial employment, opportunities and facilities for recreation, are his by right. These things are the salvation of the epileptic. He must be given new interests, new contacts and must be taught self control and consideration for others. An institution for epileptics should be a hive of industry and its atmosphere one of sympathy and friendliness. The mental and physical powers of the epileptic should not be overtaxed, but his time should be fully occupied. He must be kept from brooding over his condition. Classes in habit formation, manual training, and kindergarten work can do wonders for even a feeble-minded epileptic child. Chronic epileptics with a considerable degree of dementia can be taught cleanliness and self control and

in some instances can be made useful members of the institution community.

So far the state is committed, but there are many epileptics in Indiana who will never be sent to the Village for Epileptics. The state should endeavor to do something for them. I believe that departments, under the control of the institution, should be established in the larger cities for the purpose of giving advice to epileptics and their friends. In this way the institution might be able to reach and favorably influence the lives of most of the epileptics in Indiana. It is quite possible that this work could be extended to such proportions as to surpass in importance the work done at the institution.

The points I desire to emphasize are as follows:

1. There should be close co-operation between the institution and the medical profession of the state. We need your constructive criticism and your support. You need the institution to help you work out your problems of the epileptic.

2. There is great need for careful research work in epilepsy.

3. An epileptic is not a normal individual plus epileptic seizures. Typically, he presents a definite make-up that unfits him for community life. In addition, many epileptics are feeble-minded or demented.

4. While there is great diversity of opinion as to the etiology, and the prognosis in any case must be extremely guarded, we know enough about the special needs of the epileptic to do much to alleviate his condition.

5. We may not agree with all that the psycho-analysts tell us in regard to epilepsy, but we are indebted to them for some brilliant contributions on the subject. Dr. Clark's conception of "the potential epileptic" should stimulate to earlier diagnosis and treatment.

6. State care for the epileptic is not a charity but a duty. In Indiana it is so declared by law.

7. There are more than five thousand epileptics in Indiana and about an equal number of families in which they exert a demoralizing influence. Therefore, epilepsy is a subject of prime importance to thirty or thirty-five thousand citizens of the state.

8. Proper care for many epileptics can best be provided in special public institutions designed for their peculiar needs. It cannot be accomplished without a liberal policy on the part of the state.

9. The Village for Epileptics has a wonderful site. It has made a good start. It has been greatly handicapped since 1917 by high cost of living and construction. The foundations have been broadly laid. It is now in a position to develop as it should.

10. The activities of the Village for Epileptics should be broadened to reach and influence the lives of epileptics who will never be committed to its care.

11. States, like individuals, sometimes make promises they are slow to keep. Public opinion in Indiana is in favor of proper state care for the epileptic, but it needs prodding when the General Assembly is in session.

THE SIGNIFICANCE OF EPILEPSY*

CHESTER ADAM MARSH, M.D.

INDIANA VILLAGE FOR EPILEPTICS

NEWCASTLE, INDIANA

The ultimate causes back of the phenomena of epilepsy are as cryptogenic as the causative factors of life itself, whose secrets have long defied the efforts of science. They are, perhaps, too fundamental ever to be grasped in their entirety by the finite mind of man. Yet we have faith that at bottom there is an explanation for this disorder, even though our knowledge at the present time extends scarcely below the surface of its true meaning. Such hopes are not entirely unwarranted, however, for we have the beginnings of this knowledge made in the various branches of medical science, but kept separate from each other for practical convenience sake. When we gather together this fragmentary information from all the various sources possible, we are able, not only to classify it, but seeing it in its proper relation, we gain a better understanding of the phenomena at hand.

The nature of this knowledge is forcefully brought forth when we consider some of the current explanations of the disorder and review some of the methods instituted for its relief. The field of surgery has been fertile ground where many of these theories have sprung up for a day. In the past, to relieve epilepsy, skulls have been opened to allow evil spirits to escape, while at the present time decompression is practiced to relieve increased intra-cranial pressure. The internal carotid artery is constricted for a similar reason and the brain is explored for the removal of tumor growths or scar tissue formations that are said to produce some special form of irritation which causes epileptic attacks. The head alone, however, does not suffer from such activity for almost every organ or part of the body has been excised or subjected to similar procedure with some such purpose in view. The bowels, for example, are often looked upon

with great suspicion. Having an intestinal tract which quite often is the seat of various disorders, the epileptic is not only purged, dieted and given a good dose of worm medicine, but is just as apt to have his appendix removed or colon permanently opened to the outside world where it may be flushed and emptied at will. Almost every operation known, in fact, has been practiced for the relief of this condition.

Surgery alone, however, does not have a monopoly on the things said and done for the relief of epilepsy. Other branches of medicine as well contribute to our fund of knowledge of the subject. In the field of therapeutics, almost every drug known has, at some time or another, been recommended as a curative measure in this disorder. Bacteriology, with its rise to importance in the science of medicine, has offered more than one germ, each of which at the time discovered was thought to be the causative specific organism sought for. Pathological examinations of the brains of epileptics after death have revealed occasional different forms of lesions, including tumor growths, isolated plaques of sclerosis, or degenerative changes in the cortical cells, each of which has been thought to have a particular bearing in this disorder. Abnormal physiological processes as evidenced in the epileptic have been the grounds upon which surgical and therapeutic measures have been based. Increased intra-cranial pressure has already been mentioned. Obstinate constipation, with a resultant intestinal toxemia and improper metabolism, are other conditions of this nature. Recently we are hearing much about endocrine disturbances. Pituitary extract and other desiccated internal secretory glands of animals are at the present time being fed with great favor. Perhaps, when this fad begins to wane, some enterprising surgeon from a remote corner of the earth will come to the rescue of the internist and cure epilepsy by breaking the vicious circle of plura-glandular disharmony through a successful transplantation of the gonads of a goat.

Limited space in an article of this kind prevents anything like a careful criticism, favorable or unfavorable, of the work mentioned. Of necessity, we must content ourselves with a hasty glance at the things supposed to have a bearing in this disorder. Among the conditions supposed to act as an exciting cause of epilepsy are: First, traumatism of various kinds, chief of which are injuries to the head such as may occur in serious accidents. The use of forceps at delivery is thought to offer an opportunity for such a mishap; second, irritation to any part of the body as may be seen in eye strain, chronic inflammatory condition of the nasal cavity, dentition, gastro-intestinal disorders, pelvic disease, phimosis, peripheral nerve lesions or just any

*Read before the Indiana State Medical Association at the South Bend session, September, 1920.

condition which causes pain or irritation to the nervous system; third, organic lesions of a more general nature, such as arterio-sclerosis or cardio-vascular disease of any type; fourth, endogenous or exogenous toxins, of which alcoholism, lead poisoning and the like are examples of the latter; fifth, infectious diseases, including the acute exanthemata, influenza, cerebro-spinal meningitis, typhoid, malaria, diphtheria, tuberculosis and syphilis. Each of these conditions has been held responsible at some time for the disorder of epilepsy.

As an etiological factor of epilepsy, syphilis, however, is given little credence today as it is said to exist in but 2 to 3 percent of patients so afflicted. These figures, of course, are old ones based largely upon clinical findings. Recently, at the Indiana Village for Epileptics, a routine blood and spinal Wassermann test was begun on each patient. We are finding a much higher percentage of positive reactions than the above figures give. It has been said that the best and final test which will indicate the relationship of syphilis to epilepsy will be had when we observe the effect of intensive antisyphilitic treatment upon a series of our patients who are known to suffer from this specific disease. It is problematic, however, just to what extent we can stop seizures by arresting syphilis; for patients with the habit of epileptic convulsions firmly fixed seldom, if ever, are relieved from them for any considerable length of time through the cure of any accompanying disease. When we have completed the blood and spinal Wassermann work and have exhausted every means of investigation in the way of clinical histories and physical examinations with this end in view, we intend to report our findings. At the present time we are furnished with material for speculation only. We know that syphilis in the American army is said to have reached a mark of 16 percent in whites and 32 percent among colored troops. This causes us to wonder just to what extent lues is present in the general public. If we concede that it is very high, perhaps then we cannot consider it as an etiological factor of epilepsy, but rather that it occurs coincidental. Nevertheless, we must not lose sight of the fact that we are coming, more and more fully each day, to realize the growing importance of syphilis in mental disorders.

When we view epilepsy from this standpoint, namely, that of a disorder of the mind, we have opened to us a field of valuable information. It is not a new one, however, for Gowers long ago expressed the belief that worry and sudden fright had something to do with the disorder of epilepsy. Some recent investigators have attempted by psycho-analysis to determine the particular mental characteristics of the epileptic. They intentionally ignore physical disorders

which the patient may have, not because they are unimportant, but because of the possibility of an independent but exact approach in a mental therapy of the disease.

By this analytic method the epileptic is found to be an individual with a particular but definite mental make-up which is characterized by super-sensitiveness, ego-centricity, emotional poverty, retardation of thought, circumstantiality, a poverty of ideas, a lack of insight, an impairment of judgment, and an inability to make proper adaptations to environmental conditions. It is said that these mental symptoms may be detected in early life as the main tenets of these character defects are present long before the actual convulsions are manifested. Given a patient who is possessed with such a mental make-up, some "blank" in his character, supposed usually to be inherited, the individual shows an inability to make proper adjustments when life's handicaps are encountered. Confronted then with a physical or mental stress of a particular nature, the patient is said to go more or less unconsciously into fits to escape the situation with which he cannot cope.

Pushing this theory another step farther into the vagaries of mental processes, the fit reaction is explained to be comparable to the impulsive movements of an infant or more especially to the simpler ontogenetic type of activity as seen in the developing foetus in utero whose incitors come from motor centres of the lower order. The life of the embryo in utero is often considered as a pleasureable state of being, since food, warmth and other needs are supplied by the mother's body without any striving on the part of the foetus. Investigators, studying the mental content of the epileptic at the time of the attack or in the period immediately following, believe the convulsion and the unconscious state to be likewise pleasureable or contentful to certain sub-conscious strivings. This notion, together with the observation that the mental activity reached in the epileptic attack is from a lower brain level, has suggested the above explanation of the phenomena.

The chief object, however, of this study, as has been said, is not so much to establish a theory of the disorder as it is to gain a more scientific approach in the way of mental therapy, which in the past has been so neglected or handled in a haphazard and empiric manner. Of course a therapist of this school sets himself up as a psycho-analyst when he gets a patient and beginning to analyze, keeps on doing so until he finds the patient's blank—if not his bank—whereupon he must remove it by proper instruction to the patient or he must show him how to avoid in the future all situations with which he is not fitted and cannot be taught to cope. If, after all of this, the patient keeps on

having spells, it is his own fault and of course none at all of the psycho-analyst's.

Truly, the aphorism that, "Experience is fallacious, judgment difficult", as given to us by an ancient teacher, finds particular application when we study the subject of epilepsy. Clark, by an intensive study of the mental life of epileptics, has given us a character analysis and has perpetuated his work by its thoroughness and completeness. But when psycho-analysts attempt to explain the nature and meaning of the phenomena of epilepsy from the standpoint of purely psychogenic causes, they disregard the richer insight of modern neuro-psychology. Our mental life is purposeful, that is, our inner faculties are adapted in advance to features of the world in which we live so as to secure our safety and general welfare. To conceive of mental processes as exercising purpose by evading life's responsibilities is contrary to our ways of thinking. Even though we could change our ideas regarding purpose and concede that the mental processes of the epileptic act in a manner to evade life's conflicts, we cannot say that the escape to an infantile state of being brings pleasure and contentment. Let the regression be to the lowest level of motor excitation, whether it be an infantile state or that of the foetus in utero, life exists there which means growth, a gradual but certain evolution from a lower to a higher type of organism. All of this comes about as the organism is able to make proper readjustments to changing conditions in its environment. If the epileptic type of mind is that of an intent to evade life's responsibilities, how can it find pleasure or contentment even in the lowest order of living organisms which obey the same laws of orderly purpose. Pleasure and contentment are had just insofar as we are able to successfully meet life's handicaps and it cannot be gained by regression. As far as our problem is concerned, we had better dismiss the notion that the mind functions as an entity all of its own and leave such thoughts to the dream of philosophers who may use them to advantage in particular problems of their own.

It is truly said, however, that out of old buildings, crumbled and fallen to the ground, there always is found good materials for building again. So it is incumbent upon us to sort and carefully select from ideas which at first inspection seemed a jumbled, unrelated mass. Surgical procedure, alone, as a means of relieving epilepsy we decry as fostering false hopes. Yet we must admit that a person so afflicted may have a surgical condition just as any other person may have and this condition may play an important part in the causation of seizures. Therapeutic measures we know have usually been futile and ineffective, yet bromides and

luminal are very efficacious in decreasing the number and severity of convulsions. There is no pathological lesion known common to all afflicted with epilepsy. Nevertheless, pathological processes of any kind, wherever found, may act as a special form of irritation to the nervous system and a convulsion be a symptom of the process of the disease. Abnormal physiological processes as seen in our patient are often etiological factors of this disorder, yet the countless number mentioned weakens the degree of enthusiasm with which we accept any one of them. Anyone, however, who has made a great number of spinal punctures on epileptics knows that almost always the spinal fluid is under varying degrees of increased pressure. Again, we know of no specific toxine, exogenous or endogenous, which causes epilepsy, yet some such condition brings on convulsions in eclampsia, nephritis, strychnine poisoning, and chronic alcoholism. Likewise, intestinal intoxication, seen especially in children, is quite often accompanied by convulsions. Conditions of this kind are not looked upon as epilepsy, however, until they have reached a more or less degree of chronicity, yet the convulsive reaction seen here differs in no way from a single attack of epilepsy. So any process of disease of such a nature acts as an attack on the body as a living organism and as such will be resisted.

When we speak of the body as resisting processes of disease, we take cognizance, not only of a force behind such action, but of a force conscious of a need of that action and a force which must direct such activity: William James has said that, "All mental states are followed by bodily activity of some sort. They lead to unconscious changes in breathing, circulation, general muscular tension, and glandular or other visceral activity, even if they do not lead to conspicuous movements of muscles of voluntary life." Mental processes, whether they be instincts, inner feelings or any of our various ways of feeling or thinking, in this light become the motive power behind our activity.

If, then, we would know the significance of the phenomena of epilepsy, the syndrome of a partial or complete loss of consciousness, with or without convulsions and temporary or permanent physical and mental deterioration, if we get a better understanding of this phenomena, we must compare the functioning of the mind of an individual so afflicted to the mental life of a normal individual. A normal man, healthy in body, possesses mental powers which seldom fail him when needs present themselves. Because of his well ordered mind he can usually be expected to gain things needed. In case of unsurmountable difficulties, however, he is able to escape the dangers of too great mental stress by becoming interested in other matters.

The instances in which the normal man gives up trying when demands become too great are as many and as varied as there are interests in life. He cannot give up, however, by willing to do so. Such action can come about just insofar as he can entertain thoughts of a conflicting nature which tend to weaken strong mental states. Such action is possible where broad interests are had in life. The epileptic, sick in body as well as in mind, does not develop broad interests in life. His affliction causes him to live in a shut-in world of his own from which he cannot escape. When he develops strong emotional states, he has no avenue of escape from them, but labors on with every obstacle serving to aggravate his emotional drive to the point of an abnormal explosion.

Fatigue is the natural consequence of mental activity and it demands rest, which we get normally when we sleep at night. If, however, the mental work is of the nature of violent strain, such as is experienced in extreme emotional effort, an abnormal degree of fatigue or exhaustion is had which calls for an immediate cessation of function until a period of rest intervenes. This is what happens in the phenomena of epilepsy when the patient falls unconscious. The higher brain centres, which have to do with the directing and with the consciousness of efforts, become exhausted from over work when subjected to extreme nervous tension. The loss of consciousness is not deep enough to involve the motor centres, so the emotion goes on to an abnormal expression in muscular activity more or less unguided and unco-ordinated, which we know as a convulsive seizure.

In conclusion, then, we must look upon epilepsy as a manifestation of an individual's failure in life's orderly purpose. Because of bodily disease, which is not always easily detected, his mentality is weakened. In a person chronically afflicted with disease the epileptic convulsions become the individual's form of resentment against the attack on his welfare. The seizure itself is an abnormal muscular expression of strong emotional states. It is abnormal because it is effort which does not gain the purpose for which it is generated. It does not gain its purpose because of the partial or complete loss of consciousness which comes about when the higher brain centres which have to do with the directing of efforts become exhausted from over-activity.

DISCUSSION

DR. ALBERT E. STERNE (Indianapolis): While in recent years we have come to a somewhat better understanding of the mass of conditions

which we group together and call the epilepsies, and while there is no question about the fact that the individual cases and the groups of cases gathered together in the institutions are far better treated than they used to be, nevertheless epilepsy remains one of the big medical mysteries just as it has always been.

Unquestionably a great many states associated with convulsive seizures and partial loss of consciousness, I am inclined to believe secondarily loss of consciousness, do not belong to the epilepsies. On the other hand if we exclude these from epilepsy we are taking a very dangerous ground, because these are, sometimes, the very cases which, if studied intensely and earnestly enough, will give us the most light on the causes of epilepsy. These are the cases which personally, individually, socially, present the revulsion against the condition in which that individual happens to live. It is frequently brought about by the letting loose of some repression, such as the Freudians like to talk about, in which the equivalent manifests itself, at times, by the convulsive seizures associated with the loss of consciousness. I have known such cases to occur without the loss of consciousness, or in which the convulsion is apt to be fraudulent, but I do not class such cases among the ones I have in mind when I speak of epilepsy.

Dr. Van Nuys is quite right when he says we speak of the general forms of epilepsy as those which show the periodic attacks, more or less frequently, with the intermittent periods of freedom, with more or less psychic or somatic attacks *ad interim*. It simply means that we are giving a name to things of which we are actually ignorant. On the other hand we are inclined to take out of the essential epilepsies those cases for which we think undoubtedly we find a cause, and by that very action indicate that we do not consider them epilepsy and that the genuine cases only represent a true entity. I do not think that is correct. We are just as little justified in considering the ordinary type any more a basic disease than the so-called symptomatic types. That we have epileptic seizures, veritable true seizures associated with the loss of consciousness, which are the result of pressure from neighboring areas is true, but it still remains an epilepsy and may furthermore become genuine epilepsy and remain an epilepsy even after the removal of, say, a brain tumor. It is by no means certain even in known cases of syphilis that the administration of anti-syphilitic treatment will prove successful in eliminating the epileptic phenomena. You may still find that the epileptic seizures continue just the same. I have been accustomed to believe that we are dealing with something far deeper in epilepsy

than the idea that it is a disease alone. There are two factors to be taken into our comprehension, I believe. One is a fundamental, probably congenital defect; an undue susceptibility of the nerve-cell functions, not only of motor type, but also of sensory and of the higher intellectual, with all of the characteristics that pertain to this higher intellectual sphere. There is something fundamentally wrong with the individual who becomes an epileptic. Let me illustrate what I mean. All children who live long enough develop teeth. Only a very small percentage of children during the teething period develop epileptic seizures, however. Yet we are prone to say that it is the teething which is responsible for the epileptic phenomena. Could any conception be more wrong than that? Teething is a perfectly normal process through which millions and millions of children pass and never undergo any epileptic seizures. Therefore, there must be some fundamental defect in the make-up of the child who develops epileptic seizures during teething. Neither need the teething in itself be abnormal. It may be perfectly normal and yet that child manifest epileptic seizures, and not only once in a while, but frequently. The history of epilepsy—and I think the doctors will corroborate this statement—is that the majority of epileptics manifest attacks in early infancy. There may have been a span of years, or many years, of freedom after the teething period has passed. Then comes another period at adolescence, or close to adolescence, at which epilepsy is prone again to manifest itself, then there may ensue a period of freedom, and another phase manifest itself after many years and, once more, epileptic or epileptoid symptoms show themselves. All along we note this fundamental factor of nervous instability. We call it "nervous instability" for want of a better name. These individuals are fundamentally wrong from the start. If factors develop in these patients which have a strong influence on the nervous system, these individuals are far more apt to manifest epileptic explosions. Only a small percentage of luetic individuals present any epileptic phenomena. The pathology of epilepsy, as the essayists have said, so far as we are aware, is unknown. The same pathology will be met with in the brains of individuals who have shown a chronic process for many years, who, during life, had no epileptic seizures. I believe that Dr. Marsh has cited a group of epileptics to which more attention should be given than has hitherto been done. I wish to emphasize that. If we, as physicians, wish to have any success in this, to me the biggest problem in medicine—bigger than the cancer or tuberculosis problems in my estimation, because they both mean death while epilepsy means a living death to

the individuals, the destruction of family groups, and has a social side which the other two do not possess—we must continue to study it intensively.

Speaking on the question of heredity, I have been impressed for a great many years with the fact that we are talking entirely too glibly about the matter of heredity. True heredity must encompass the idea that the earliest union of spermatozoon with ovum is the organism acted upon. If you have a disease malignant enough, vicious enough, to infect that impregnated ovum, *early*, then the concept that that impregnation will remain viable is almost impossible to entertain. In cases of true hereditary disease we find early abortions almost invariably, as, for instance, in syphilis. On the other hand, a child of syphilitic parents may be born viable, but with a *congenital* disease and not an hereditary disease. Disease has been conveyed to the foetus after it has attained a state of development where viability is possible. Therefore, we must sharply define what we consider *true heredity* from conditions which are truly congenital. I believe that true hereditary diseases are very, very rare. I know of quite a number of congenital diseases, of which syphilis is the most common. We find many children born with evidences of having undergone some infection *in utero* from the mother. There are many instances of that, but that child must have been viable when it attained that disease, otherwise it would have aborted. The investigations of Warthin, who has found the spirocheta pallida in almost every tissue of the body, including the brain, in individuals who during life had never given any evidence of syphilis, or any laboratory evidence thereof, indicate that it is possible for germs to lie dormant in the body for a great length of time and even never show any syndrome during life. It is beyond question that we are dealing with some such thing in the conditions which we are discussing here this afternoon. Like Dr. Van Nuys, I have passed through various cycles. There have been times when I felt that I knew something about epilepsy. Now I know that I know very little. I manage cases better than I used to, because I fight more and judge every case individually. Each case must be considered separately and managed in such a way as will meet the indications, but so far as knowing anything about the genuine malady, I know as little as did Susrati two thousand years before Christ.

DR. JOHN HURTY (Indianapolis): I would like to ask Dr. Van Nuys if there is any prospect of the prevention of epilepsy. Dr. Sterne has said it is a fundamental neuro-defect. How may neuro-defectiveness be removed by other method than the control of heredity? I do not think

anything was said about the heredity features and I would like to know whether this has been investigated, whether epilepsy is supposed to be hereditary and what the chances are for prevention.

Here is a fundamental: When conception takes place the gate of gifts is closed absolutely. And another fundamental: A sanitary problem cannot be solved by caring for the victims of insanitation. I do not believe disease is hereditary, but we know that unstable nervous tissues may be inherited, which is another thing, and then disease is expressed in numerous ways: epilepsy, insanity, tuberculosis. Syphilis is protean in its qualities, and I think we will eventually find out that a strong man makes for success and education and brings things about. He does not need to be cared for, he cares for others, and we all do that in the degree that we have inherited the ability to make our own environment.

DR. WALTER D. HOSKINS (Indianapolis): I would like to ask whether there is anything to show that insanitary feeding, intemperance, undernourishment, and early home influence is a factor in the causation of this disease.

DR. CHESTER A. MARSH (closing): Dr. Sterne has truly said that the best we can do in our study of epilepsy is to throw side-lights on the subject. It is like all other subjects in medicine in that we do not know all there is to be known about them. There are many who believe that at bottom there is but one science of all things medical and that until all is known, no one thing can be completely known. But we are far from realizing such a science in medicine. Medical science is not an exact science, but has its beginnings of knowledge made in many different places. Epilepsy being a medical problem, is best understood, then, when we gather and carefully consider information pertaining to it from every possible source. The ultimate explanation, however, of a process of disease of this kind, which involves the very principles of life itself, of which we know so little, is at present beyond our powers of comprehension.

Although it seems too deep to be solved, it is interesting to observe the attitude of different minds towards it. Open-mindedness in dealing with it is hard to maintain. Over-enthusiasm is seen in the eagerness of the medical profession to accept for a time theories and cures only to discard them later when they are found to be of limited importance. From the unfruitful experience of having based treatment upon advice of such a doubtful nature, it is to be expected that we should find some physicians who view the problem with extreme conservatism. Any effort to explain the disorder, by those

taking such a position, however, does not extend further than vague generalizations which, although they cannot be denied, do not add anything to our knowledge of the subject. Dr. Hurty brings up the matter of heredity in epilepsy. We have all seen charts, large enough to cover these walls, marked off into circles showing inherited tendencies of degeneracy—feeble-mindedness, insanity, suicide, criminality, etc. Do we gain any knowledge of a strictly medical nature from them? What causal relationship is established? Is it enough to say, "Oh, he inherits that from his defective ancestors?" Such assertions are comparable to attempted explanations of certain phenomena of nature about us where it is said, "Oh, that is natural" without showing the physical factors which produce them.

Dr. Sterne has spoken of an inherent cortical instability as manifested in the epileptic. The notion is not a new one for it occasionally appears in medical literature. It is true that the conception is cloaked in medical parlance, but our patient often tells us as much in his own simple language when he says that he is "off in the head," "that he was made wrong". We cannot deny that such an instability is present, but the bare assertion of the fact calls for a further explanation of it and it is not had where a claim is made of a growing realization of an inability to understand the disorder.

Recent advances made in many branches of medical research have made it possible for us to have a better insight into the phenomena of epilepsy. This, however, has not all come about without the abandonment of positions which once offered hopes of a solution of the problem. We have seen for example that surgical operations are no longer fashionable for the relief of epilepsy. A more recent position no longer tenable, but one always held to be more or less radical, is the psycho-genic theory of epilepsy. Abnormal mental processes are seen in the phenomena of epilepsy, but their analysis and explanation barely scratch the surface of the true meaning of the disorder. Physical health is the measure of mental health and our ability to understand epilepsy is dependent not only upon psychological analysis of abnormal mental symptoms, but upon a correct diagnosis of somatic disorders as well.

DR. W. C. VAN NUYS (closing): I have little faith in the bacillus of epilepsy, but I sometimes think that a germ of some kind infects the brain of the student of epilepsy. Eighteen years ago I thought I knew something about epilepsy. However, I have known less about it each succeeding year. At any rate, I can safely say that I have discarded most of the

opinions I held at that time and that I now have very few fixed opinions about epilepsy.

I want to say that for fourteen years I have been reading occasional papers on epilepsy, and each time Dr. Hurty gets up and says "What are you going to do to prevent it?" I knew he would do so today. I wish I could give him a satisfactory answer. As far as heredity in epilepsy is concerned I believe we are thinking less about it than we did some years ago. Just why I do not know, except that it seems to get us nowhere. One reason, perhaps, is that comparatively few epileptics have epileptic parents or grandparents, and if they do their chances for improvement or recovery do not seem to be lessened thereby. I am of the opinion that alcoholism, and especially syphilis, are at the bottom of most cases of epilepsy.

THE PHYSICIAN

THOUGHTLESS PROFESSIONAL CONDUCT
AND SPEECH*

BY

FRANK B. WYNN

INDIANAPOLIS

In our own time the practical application of laboratory revelations has given to medicine an overweening trend toward materialism. We have come to reckon things medical by structure, bacterial growth, chemical reaction or mechanical adjustment. It is a focal, special, material thing upon which the eyes are centered and action based. The eternal quest is for pathology and its eradication by mechanical or specific measures. Long trained to search for specific and material causes of disease (and with amazing benefit to medical progress!) we have come to forget or doubt the role of mental, moral and spiritual agencies in the production or relief of morbid states of the mind and body. Under a separate article these subjects will be considered more fully. At this time it is only intended to call attention to some of the unsuspected shortcomings of physicians; what may be characterized as the sins of thoughtless speech and conduct. In the treatment of this subject it is hoped to escape the charge of being a carping critic. Let my appeal be viewed rather as an exhortation against thoughtless professional methods or unguarded language capable of misinterpretation by the patient to his own detriment.

Negative sin, that is failure to perform obvious duty, does not excuse the physician from guilt. Commendable aggressiveness in one direction sometimes leads to oversight of errors in another direction. The very fact that the

medical profession holds a position of high respect in society places large responsibility upon the physician. This makes it a bounden duty for him to measure well his every word and act. Loose medical talk may count for but little at the time, but in its ultimate effect bring disastrous consequences—to the patient, and the community, reflecting discredit upon the profession.

Themselves human, physicians are not rarely given to the human weakness of gossip about cases. The doctor is constantly besieged with inquiries about the sick. As an evidence of sympathetic concern they bespeak a commendable fraternal spirit. But how is he to know they are not prompted by an unfriendly curiosity which thoughtless conduct may gratify? Hence it were the part of wisdom to maintain an attitude of reserve, stating guardedly only such facts as the public may know without violation of one's confidential relations to the patient. Few indeed are the physicians who violate these traditional obligations. Yet the gossip monger is occasionally found in professional ranks, peddling from house to house the stories of cases and experiences. Such narratives may afford entertainment, but they take from the dignity of professional conduct. It is a temptation to which most of us yield at one time or another; occasionally pardonable, but always fraught with danger. The gossiping habit once established is not only reprehensible but deplorable for the physician himself, since the community will soon come to judge him with distrust. Even the law takes cognizance of our obligation to secrecy in professional matters. The confidence reposed in us should never be abused.

Akin to the gossiping evil is tattling to the press. The newspaper appeal proves a flattering temptation which it is difficult to resist. The persistent and prying reporter almost forces the physician to embarrassing admissions by threatening public announcements about patients which will be even more humiliating. A plain statement of the facts consistent with the rights of the patient is probably best in most cases, with a courteous request that the physician be not humiliated by parading his name in connection with the case.

It is astonishing how many laymen consult the physician with preconceived convictions as to the localization and nature of the malady from which they are suffering. They may not come for a diagnosis but with the request for a prescription for a named disorder. Their meager knowledge of the human body, its functions and morbid manifestations, excuses to some extent their shortsightedness.

The layman who asks for a headache remedy is not presumed to know that pain in the head

*Tenth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

is only a symptom which may arise from a dozen different causes, remote from the seat of pain and requiring as many different methods for its relief. He is not to be condemned for his failure to grasp the largeness of the problem. But what shall we say of the physician who accepts this self-made, symptomatic diagnosis and prescribes a stock remedy for headache?

Of all symptoms brought to the general practitioner for attention, none rivals in frequency those referable to the gastro-intestinal apparatus. To the layman's mind these naturally suggest the existence of stomach disorder. As an introduction to the story of his complaint he is very likely to state that he comes to receive treatment for "stomach trouble". How alluring is the temptation to fall in with the patient's self-made diagnosis and institute the routine treatment for such conditions! Diagnostic suggestions of this kind, coming from laymen, should always bring instantly to the practitioner's mind the well-proved clinical fact that organic stomach disorders are rare as compared to the relatively greater frequency of stomach symptoms arising from nervous or remote physical causes. Culpable indeed is the physician who permits himself to be led blandly into error by the patient's ignorance or still worse by his own inadequate investigation of remote pathologic conditions likely to give rise to stomach symptoms. Self-made diagnosis is dangerous for the patient; its acceptance by the physician is a gross reflection upon his professional intelligence and skill. His business is to find out the truth; not blindly to be led. It is for us as painstaking diagnosticians to show that some of the cases of so-called "stomach trouble" are really incipient pulmonary tuberculosis; many are pure neuroses; others represent the toxemia of nephritis; still others are clear-cut cases of gall-bladder disease or appendicitis.

Again and again the druggist has been arraigned for prescribing over the counter—a most reprehensible practice, which cannot be too strongly condemned. But whilst casting the lance of criticism at him, let us not out of carelessness of habit or from haste to encompass large business, be guilty of the same superficial and dishonest practice. Our duty is to hearken patiently to the patient's narrative of his complaint; add thereto from painstaking personal inquiry; make such careful observation and investigation as circumstances will permit; and lastly weigh all the data upon which to base judgment in diagnosis and management. Any other course falls short of one's full duty as a physician worthy of the calling.

Of the body functions none is more frequently disturbed than that of urination. To the lay

mind this deviation becomes a source of annoyance calling for medical counsel. Common observation reveals that exposure to lowering temperature may produce marked polyuria, as will tense or harassing mental anxiety produce the same symptom. Small water intake and animal diet plus condiments and stimulants may develop burning on urination. Extreme obstipation or a severe "cold" may give rise to mild cystitis with frequency of micturition. When the physician is consulted for such minor disturbances he is quite likely to assure the patient that it is only a transient difficulty, adding that it is just a "little kidney trouble" which will yield quickly under the treatment advised. This seems plausible to the patient and he goes his way with hope and satisfaction, making quick recovery. Whilst the physician consulted knew perfectly well the difficulty complained of was not "kidney trouble" at all, he salves his conscience with the reflection that it is not necessary to explain fully to the patient the nature of such minor ills, especially since time and treatment will soon work the cure. What harm therefore if he speaks thus loosely in a diagnostic sense? Why worry? The explanation satisfies the patient. The injury comes later, when the patient perhaps consults some other physician and the latter remarks bluntly: "Why you have no 'kidney trouble'!" Thus doctors come to misunderstand each other. Or let this same patient go his way with the impression that he has "a little kidney trouble," until he makes application for life insurance. If he answers truthfully about what the former physician told him he is very likely to suffer a rejection. Or again let us suppose that years subsequent to the early experience, symptoms again appear in the urinary tract. A careful examining physician may be completely thrown awry in his diagnostic judgment as to whether the present trouble is acute, recurrent or chronic.

Akin to the foregoing laxness of diagnostic expression is another phrase even more deleterious in its influence—"heart trouble." Patients have come to use the terms without proper discrimination as between functional and organic disturbance of the heart. Let us beware lest we are at times guilty of the same looseness of distinction. Recently the writer sat at luncheon in the midst of a group of distinguished internists, when a well-known heart specialist spoke at some length his convictions on this subject. He stated that it was astonishing how many persons consulted him for "heart trouble" who did not have organic heart disease at all. He did not so much allege failure of diagnostic skill on the part of physicians as a lack of accuracy in diagnostic expression. Neuroses, gastric, intestinal and other toxemias associated with heart

disturbance, were loosely referred to in the presence of the patient as heart trouble. Inaccuracy of diagnosis in such cases is of course deplorable. Not less reprehensible is that carelessness of speech which burdens for life the mind of the patient with the thought that he has heart disease. Forever before his mind's eye is hung the warning sign. Fear haunts his prospects in life, puts a brake on his energies, and curtails his activity in the open—the very thing perhaps which the patient needs most of all.

The scientific advancement of recent years has schooled physicians well concerning the relation of bacteria to disease production. Practical application of this knowledge has enabled wonderful progress in the prevention of infectious maladies. Equally commendable advancement has not been made in the prevention of the rapidly increasing neuroses and psychoses. Yet this vast army of chronic sufferers may be greatly reduced, many of them prevented, by applying at the proper time the laws of mental hygiene.

It is not designed here to discuss the large problem of the psychogenic causation of the functional disorders, except as related to the sexual sphere. However much, by parental care, education and religion, effort may be made to hold within bound the sexual impulse—its dynamic assertiveness remains as strong as the desire for food or even the laws of life itself. The sexual sphere is that about which most of the phobias cluster. They constitute a large contingent of the practitioner's clientele—a long-suffering, moody, harrassing group. The purpose of this discussion is to try to show that the physician may be responsible in part for the development of this lamentable psychosis.

Proof of this statement is offered in the brochure of the quack, which reeks with insinuating and suggestive appeal to the sexual realm. If this conscienceless practitioner can but succeed in getting the impressionable individual to read his sex literature, the vile current is at once established which pours blood-money into his coffers. This is wanton and aggressive professional sin for which no words of condemnation are too strong. If the brazen charlatan may, by evil suggestion, so prey upon credulous individuals is it not possible that decent practitioners, too, may unwittingly, by looseness of speech contribute to such an unfortunate state of mind? How important, therefore, in the diagnosis and treatment of any disorder of the sexual system, in man or woman, that every act and every word be measured by thoroughness and care. If positive lesions are found to exist they should of course be treated by the most approved methods. On the other hand indefinite, subjective phenomena without discoverable lesion call for the utmost caution in

diagnostic opinion or treatment, which may fix the attention upon the sexual system.

The woman of neurotic heredity, neurasthenic complex, and indefinite pelvic symptoms, who is told, even in the absence of discoverable lesions, that she has "womb" or "ovarian" trouble has had put upon her a psychogenic burden harder to bear and more difficult to throw off than physical conditions which later study may reveal. These truths come often to the knowledge of the neurologist.

To the urologist no case proves more refractory to treatment or more vexatious to patience than the sexual neurasthenic—with or without discoverable lesion. Careful investigation of the history will generally show: First, a neurotic heredity; next, an early indiscretion or minor infection; then the reading of suggestive, quack literature; fourth, treatment from time to time by various practitioners—all influences directing the thought of the patient into the same stream which flows into the dismal-swamp of sexual fear. Do not these facts put upon us a tremendous responsibility in diagnostic determination and therapeutic management in these patients? It is not of course contended that the average practitioner is guilty of the same wanton design as the quack in feeding morbid mental tendencies and nursing these cases for mercenary ends. If there be such they are not entitled to march in the ranks of decent practitioners. Their place is rightfully in the company of charlatans. The appeal here made is to the honest and fair-minded practitioner that he be not guilty of the sin of thoughtless speech or conduct in these cases.

Within the category under discussion is syphilophobia. It is not an uncommon experience with careful and conscientious urologists to reach the conclusion that a considerable number of these sufferers have never had syphilis. In such, a negative Wassermann and personal history fail to give clinical evidence of the luetic nature of the original infection. If error was made by the practitioner in such a case, it will often be found that he allowed his best judgment to be swayed by the importunity of the mentally distressed patient. The latter, impelled by fear of consequences, appealed strongly for immediate action. He was not content to wait for certitude in diagnosis. He reasoned thus: "You say this may or may not be syphilis; that time alone will clear up the diagnosis as the disease undergoes evolution. The latter is just what I want to avoid. I am thinking of the effect on my whole life and progeny. Can you not nip the thing in the bud and prevent subsequent ravages? I prefer to play safe and have you to institute at once antisypilitic measures." And so it was done. The patient never afterward developed convicting evidence of luetic

disease, but he was never able to shake off the fear of an outbreak. The flame of anxiety is kindled by every pimple, pain or physical discomfort. In very recent times, of course, serologic diagnosis is most helpful in lifting the cloud of doubt. The point of all these references is that the physician is shortsighted and falls short of duty who does not determine absolute diagnosis in these cases. Any other course is unfair to the patient and on the part of the physician amounts to contributory negligence.

Let the closing thought of this critique be the oft-repeated sentiment that we should never stray from the conception of medicine as a profession and not a trade. Neither the materialism of the age, its obtruding commercialism with the ambition for big business, nor its confusing stresses or insistent demands, should divert us from the straight and narrow path of professional rectitude. In the journey, accordingly, we should avoid the by-paths of thoughtless acts and careless speech which lead both patient and physician astray.

DOCTORS AS "EASY MARKS"

Anent the subject of doctors as "easy marks" in the matter of foolish investments, the following editorial in the February number of *Clinical Medicine* leaves nothing unsaid:

"Goat Feathers." It occurs to us to wonder whether doctors ever collect goat feathers, as is so humorously described by Ellis Parker Butler in that skit with the droll title. Are we medical men ever made "the goat", as the slang term goes?

When you bought that set of books, doctor, in 24 volumes by Professor E. Scribbles Wrott, didn't you add a few feathers to your collection? The glib-tongued agent with his prospectus skillfully concealed under his coat (perhaps it was a "her") had run the gauntlet of the office girl and gained entrance to your sanctum, and had set going his (or her) lingual victrola, until you weakly yielded and signed your name on the dotted line, binding yourself and your heirs forever, to a dollar down and a dollar a month through all eternity, world without end. Then, every time the collector came around, how you hated yourself and called yourself 24 kinds of a fool. Yes, you added a few goat feathers to your collection that time, 24 of them.

Then, doctor, haven't you got, hidden away in a secret drawer, where not even your wife ever saw them, a few beautiful gilt and illuminated stock certificates of the Silliman Oil Company down in Texico near Mexas that was boring gushers and making a new crop of millionaires every 30 days? You remember what

visions of wealth romped around in your brain for a little while after the visit of the genial promoter, who was willing to let you in on the ground floor because he had heard of you as a regular fellow from a banker in St. Louis, who had said to him just before he left there: "When you get to Chicago, be sure to call on my old friend Dr. ——— (there, I came within an ace of writing my own name down). This is such a good thing that we must have him with us." And, you are still waiting for the dividends.

But, if you want enough for a feather bed, we can tell you where to find them. Get out that pile of old ledgers from the closet, brush off the dust, leaf through them, and look at all the accounts that on the credit side are just clean, white paper. Think of those families that called you the best doctor in this city, until the time came to pay the bill, and, then, they told the neighbors that you had nearly killed little Johnnie, and that they had dismissed you just in time.

Then, there are lots of accounts that would have been perfectly good if you had sent out your bills on time and pushed their collection just like a regular business man. But, you were afraid of offending a good family and let an excellent account slide along until it was a "dead horse". Finally they moved away and that was the end. Who was the goat that time?

Do you remember the time you did that operation, and sent the patient a bill for \$25? And, when he came in to pay it, he said: "I was pleasantly surprised, doctor; I expected it would be at least \$50." You looked foolish, and stammered something about "live and let live"; but when he was gone, you kicked yourself all around the room. Ma-a-a!

How about that time when a strange family engaged you for an obstetric case and you were too timid to demand a retaining fee? You stayed at home from everything you wanted to go to, for fear you would miss it. Then when weeks had passed without your hearing from them, you called to see what was the matter, and found it was all over long ago. They had called another doctor on the washerwoman's recommendation. You went home mad and resolved that in the future every stranger would have to plank down an X as a retainer. Goat? Why, you could fairly smell yourself. You had an odor louder than the billy staked out on the vacant lot next your house.

No, no, we shall tell Ellis Parker Butler that he may be right in claiming that "pigs is pigs", but we know that "goats is goats", and that the doctors can give the author pointers when it comes to gathering the feathers.

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EDITORIALS

EPIDEMIC HICCUP

In commenting on the epidemic of hiccup which seems to be prevalent in Europe and this country, the *Journal of the American Medical Association*, January 22, 1921, has the following to say: This disturbance is usually the subject of humor rather than of medical concern, and it is seldom given the serious attention which it probably merits. Pathologically it seems to be associated with irritation of the phrenic nerve, from gastro-intestinal disturbance, from neuroses, or from remote disturbances of the central nervous system not as yet determined. The irritation may be of peripheral or central origin. In pneumonia or typhoid fever, hiccup, perhaps due primarily to the effects of bacterial toxins, may be a serious complicating factor, even causing death. Unless hiccup persists for an undue length of time, preventing the patient from securing rest or from continuing his ordinary occupation, it attracts little notice. However, in the epidemic through which we now seem to be passing, many cases have occurred in which patients hiccuped as frequently as every three or four seconds for periods of a week or longer. Lhermitte points out that the first appearance of the epidemic of which he knows occurred in Vienna in the winter of 1919-1920, and was reported by Economo. Large numbers of persons were suddenly attacked with uncontrollable and almost incessant hiccup rebellious to all treatment. In most instances the disturbances ceased spontaneously in a few days, although in one case the hiccup persisted for a month, the patient having only a few hours of rest each day. The hiccup seems to have been associated with the outbreak of epidemic encephalitis, and it is Lhermitte's belief that the association of such epidemics with epidemics of lethargic encephalitis indicates a causal connection. He states that five well-known French clinicians, including Netter, are in accord with this belief. Although epidemics of hiccup have been reported for centuries, there is no specific or even effective treatment.

Two methods of treatment have been suggested, the first attempting to reduce the hyperexcitability of the medulla, the spinal cord and

the phrenic nerve through the use of sedative and narcotic drugs, and the second attempting to exert an inhibitive influence by physical measures on the nerve centers in reflex erethism. The number of these physical measures is legion. They include pressure on the spine (Nothnagel, Rethy), compression of the arms (Piretti), pressure on the ulnar nerve (Pauzot), pressure on the eyeballs (Sicard and Paraf), influencing the diaphragm by forcible flexion of the legs (Jodicke) or by an apparatus (Boyer, Rostan), distension of the esophagus by swallowing a chunk of bread or something similar (Sicard and Paraf), distention of the stomach (Kanngiesser), icebag to the stomach region (Eloy), direct compression of the phrenic nerve against the scalenus muscle (Leloir, Grognot), faradization of phrenic nerves (Dumontpallier) and traction on the tongue (P. Lepine). All of these measures have failed in some cases, and their chief recommendation is that sometimes they seem to be effective and that in general they are harmless. The significant fact brought out is that there may be a relationship between epidemics of encephalitis and of hiccup. This point merits more thorough investigation.

THE STATE FAILS

A child suddenly falls ill. The malady is strange; physicians who are called give the disease a name, and tell the parents that any relief which science affords is only palliative and not curative, and that body forces frequently overcome the disease. The condition is actually encephalitis, an inflammation of the brain. As with other diseases affecting the nervous system, there ensue excitation, delirium, fever and twitching of the arms and legs. The parents are anxious and wish to do everything that is humanly possible. It is not surprising, therefore, that they accept the services of a pretender to scientific knowledge. They know no anatomy or physiology; they cannot judge between the true and the false; they know only that their child is sick and that a man who is permitted by the state to practice the healing art is offering them aid. They accept. How many parents would not? The chiropractor administers his treatment. Gradual remission of the symptoms ultimately occurs. The parents are overjoyed. In the first flush of their happiness, they write glowing testimonials to the chiropractor's ability. A miracle has been worked! The sensational press is furnished with "live" material. Sunday "feature pages" carry columns of write-ups and pictures and incidentally—or is it incidental—whole pages of advertisements of practitioners of the pretending science. "One hand washes the other." Then it is discovered that the miraculous cure

was not a cure, that the treatments have in fact been so painful that the child's condition is possibly worse; that the chiropractor has been relieved of attendance, and that the child resents his muscular ministrations. Does the press give the public these facts? Do the advertisements cease? Not at all. What of the parents and the child? To whom shall they look? Whose duty was it to protect them against ignorance and incompetence? "The first duty of the state," says Disraeli, "is the care of the public health." When the state permits those with no scientific knowledge, who know nothing of physiology, of anatomy, of pathology, of infection or immunity to treat disease—no matter what the method employed—the state fails in its duty.—*Jour. of the Amer. Med. Assoc.*, March 5, 1921.

MEDICAL FACTS AND CHIROPRACTIC FICTION

Throughout the length and breadth of the country there has recently been heralded an alleged marvelous cure of what the newspapers have been pleased to call "talking sickness". Not only have the newspapers made sensational stories out of it, but the chiropractors have used it as a basis for flaming newspaper advertisements extolling the virtues of their cult. Reading these news articles and advertisements one learns that an 8-year-old child was suffering from a "strange talking malady" that was so remarkable that "specialists from all parts of the country were interested in her case". Further, one learns that "every form of sedative had been administered without improvement", and "all the medical physicians and consulting specialists whose services were tendered" failed to bring relief. Finally, a chiropractor "pleaded for the opportunity to save the child and gained consent of the parents". In a "few moments" the chiropractor "adjusted" the "second and fifth vertebræ", and "the talking stopped"! And, continued the full page advertisements, in very large and very black type: "She Has Completely Recovered and Is as Healthy and Happy as You." So much for the fiction. It made a good newspaper story, especially for those newspapers that saw in it the opportunity to suggest to the chiropractor fraternity that, as their business had been given a magnificent boost in the news columns, it was highly desirable that they should add to this free advertising momentum an additional urge through the pages. Rate card enclosed. What are the facts? Briefly these: That the child did not suffer from so-called "talking sickness"; that the alleged adjustment of the spine did not "cure" the "sickness" and, finally, that the child has not "completely recovered", but is still dangerously ill. The case was one of epidemic encephalitis, with

a temperature ranging between 99 and 103 and active delirium, inequality of the pupils and strabismus. The improvement was gradual and that incident to the ordinarily observed progress of the disease. As shown by the case record, the chiropractor's "treatment" did not modify the course of the disease. The "talking" had ceased at intervals previous to his visit and continued at intervals after his "treatment". But the publicity given the case offered great opportunities for advertising and, as advertising is an important part of the chiropractic curriculum, it is but natural that this cult should take advantage of it.—*The Jour. of the Amer. Med. Assoc.*, March 5, 1921.

MEDICAL DEFENSE BY THE ASSOCIATION

The Indiana State Medical Association has furnished medical defense for its members since the year 1912, but throughout the time that this feature has been in operation there has been considerable misunderstanding on the part of many members as to just how it is obtained and conducted. This misunderstanding has been due to the fact that few members have read the By-Laws of the Association which covers the medical defense feature, and even secretaries of county medical societies, who should be familiar with the By-Laws, are unable to furnish any reliable information when asked to give assistance to a member who has been threatened with prosecution. Therefore, for the benefit of all the members of the Association we are reproducing from the By-Laws the salient points of the medical defense feature.

Briefly stated the Association will not undertake the defense of a member who has failed to pay his annual dues prior to the rendering of services which are the bases of the suit. Neither will the Association defend a member who is not in good standing in the Association, which in fact means that defense will not be provided those who are delinquent in the payment of dues or suspended from membership for any reason whatsoever. The dues are payable on January 1 and become delinquent on January 1 of each year. The membership card of the Association, duly signed and dated by the secretary, is considered the only bona fide evidence of payment of dues or membership in the Association. The liability of the Association includes only the expenses necessary for the legal defense of its members and not damages awarded.

Concerning the manner of making application for medical defense, the rules as laid down by the By-Laws are as follows: A member desiring to avail himself of the services of the Committee on Medical Defense in connection with

litigation brought or threatened must first submit to a local committee of his county medical society—to be composed of the President, Secretary and one other member in good standing who may be nominated by the defendant—a full statement of the question at issue, including the diagnosis and treatment of the case and the names of physicians, nurses and other persons having knowledge of the same, who may be summoned as witnesses. The committee of the county medical society shall immediately after an investigation of all the circumstances and facts, transmit its report, with recommendations, to the Committee on Medical Defense of the Association. Accompanying such report from the county society, if favoring medical defense by the Association, there must also be furnished the written authority of the defendant granting to the Medical Defense Committee of the Association full power to act in his behalf, and an agreement that his case shall not be compromised or settled without the consent of a majority of the Committee on Medical Defense. In the event that the county committee shall fail to recommend the case as one worthy of the recognition of the Association, a direct appeal may be made to the Committee on Medical Defense of the Association, whose decision shall be final. Suits brought against the estate of a deceased member shall be defended as if that member were alive; provided, that such member was in good standing in the Association at the time of his death and that services for which indemnity is asked were rendered while the deceased was a member in good standing.

Each member of the Committee on Medical Defense of the Association is entitled to an honorarium of \$10 per diem for services actually rendered while at home, and \$30 per diem, with traveling expenses, if required to go out of town in the investigation of any case or in attendance at court, and these same fees shall be allowed to expert witnesses under similar circumstances.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

AN Actual Occurrence in a Chiropractor's Office:

Patient, "I have been told by regular doctors that I have a leakage of the heart."

Chiropractor, "That is nonsense. A leakage of the heart is an impossibility. Where would the leakage go to?"

WE wonder how many doctors who in advertising the fact that they have just returned from a two weeks' post-graduate course at Dr. Cutem's Clinic are not in reality advertising Dr. Cutem more than themselves. Why kick because people go to distant clinics, sometimes for trivial medical or surgical attention, when the greatest advertisers for those clinics are the doctors who let it be publicly known that their instruction and experience has come from those clinics? Very naturally a certain number of people are of the opinion that it is the proper thing to go to the fountain head.

THE free venereal clinic as at present conducted in many cities does not deserve the support of the regular medical profession. It antagonizes medical men and it pauperizes the community by making it possible for the well-to-do to secure something for which they ought to pay a reasonable fee. When conducted properly the free venereal clinic is of great value to any community, but its operation should be regulated in order to meet with the encouragement and support of all right minded members of the regular medical profession.

MEMBERSHIP dues came in very well during the month of January and there have been a few stragglers during February. There are a few delinquents who, as a result of delinquency, have been suspended from membership and are deprived of all of the benefits of our association. They must be reinstated in order to be in good standing. In the meantime, if those delinquents happen to render services for which they are sued for malpractice, the association does not defend them. In a few instances the failure to keep up membership in the association has been a costly experience through failure to secure the association's medical defense in malpractice suits.

The American Legion Weekly has adopted an advertising policy against all misleading, fraudulent and immoral advertising which is admirable, and might well be followed by all newspapers, magazines and other periodicals. They make the statement that the advertising columns of the *Legion Weekly* shall be as carefully guarded as its editorial and news departments, and that its "columns are open to the

honest advertiser and shut fast and tight to the dishonest one". Among the classes of advertising which the *Legion Weekly* declares it will not accept are: Advertisements offensive to moral standards or sentiments; objectionable medical advertisements of such nature that claims are made not in accordance with facts or experience; advertisements of products which contain drugs of a habit-forming nature—dangerous to health.

FOR many years Indiana was burdened with a board of medical registration and examination that in no sense was a representative board or did credit to the medical profession of the state. It was a political board, the appointees receiving their appointments as a direct result of politics and not as a result of fitness for the position. After many years of service by such a misfit board we finally have succeeded in securing a board that in the main is representative and stands for high ideals. So far as the regular medical profession is concerned, it now is represented on the board by men who stand high in the estimation of the medical profession, and who not only are qualified but have the intention of serving in a manner that is entirely creditable to the position. We look for a high type of service and believe that we shall not be disappointed.

WE often have heard it said that the way to reach a man's heart is through his stomach. The chiropractors are trying to make people believe that the way to reach all diseases is through the spinal column, and they even go so far as to say that our senses are controlled by the spinal cord and any interference with our senses is due to pressure upon the spinal cord. Next they will tell us that we do not need any brains and that the cranial cavity with its contents is entirely superfluous. We are quite willing to admit that a brain is superfluous for the average chiropractor, who does not exhibit any great tendency to utilize his brain, even though said brain is as illy developed as it is in the average chiropractor. The idiotic and inconsistent nonsense concerning anatomical and physiologic facts, enunciated by chiropractors, would be amusing if not pathetic because believed by so many credulous people who sometimes suffer severe penalties in consequence of their credulity.

LETHARGIC encephalitis, commonly called "sleeping sickness", is prevalent on the Atlantic coast, and the health authorities of some of the larger cities like New York and Boston are attempting to cope with the disease by making it reportable, even though they admit that the disease is not contagious in the ordinary sense.

Dr. Simon Flexner says that the disease probably is of microbic origin and of a communicable nature, though the New York City health commissioner says that out of the total number of cases reported last year in New York City only in two instances was a second case reported where one previously had been found. In Indiana there probably have been several hundred cases of the disease during the past few months, many of the cases having been cared for by public hospitals without attempt at isolation. So far as known no second case has developed as a direct result of contact with these cases. However, the seriousness of the disease should not be underestimated, in view of what seems to be a gradually increasing death rate.

WORD comes from Washington to the effect that the amount of liquor a sick man may acquire legally is fixed definitely by statute, but the only limit to the amount of wine he may obtain is the "sound and honest judgment" of his physician, and perhaps the depth of his purse. Really all this controversy over the permission to use alcoholic beverages of any kind in sickness seems to be not only unnecessary but has a tendency to nullify the effect of the prohibition acts. While we are not in sympathy with all that has been done in an attempt to make this country "bone dry", yet we are forced to the conclusion that if prohibition is a good thing then let us have real prohibition, and we venture to say that there is no more real necessity for sick people to have alcoholic beverages than there is for any person to have them. Furthermore, it is more than likely that many a man and not a few women may get sick at convenient times and be able to profit in alcoholic beverages at the expense of the "sound and honest judgment" of some physician. There also will be many a physician who can stretch his conscience in prescribing alcoholic beverages. Therefore, the whole question simmers down to one of evasion of the prohibition laws and regulations.

THE chiropractors, the Christian Scientists, the anti-vivisectionists, the members of the League for Medical Freedom, and a horde of other opponents of rational medicine, are able to raise large amounts of money for the purpose of fighting medical and public health legislation. There is no question but that money cuts a big figure in moulding public opinion and influencing legislation as a direct result of propaganda carried on through newspapers, magazines and paid lobbyists. The time has arrived when members of the regular medical profession must appreciate the fact that they must get busy in promoting sane and beneficial medical and public health legislation. This means propaganda, and

propaganda means expenditure of money. Some of the cultists secure from each of their members from twenty-five to one hundred dollars per year. Regular doctors, so far as we know, have never individually contributed a penny in aiding wise and beneficial medical or public health legislation. If they are not a lot of "tightwads" they will listen to a plea that may be made to them to contribute something for the support of a movement which has as its ultimate end not only the protection of the public from medical frauds, but the protection of the medical profession as well from vicious legislation.

We are quite interested in the question of advertising inasmuch as *THE JOURNAL* largely depends upon advertising for its support. Therefore, we feel in duty bound to call the attention of our readers to the advertising in *THE JOURNAL*, even though we realize that perhaps all of the readers of *THE JOURNAL* regularly scan the advertising pages of the medical journals that come to their desks. In fact we are willing to gamble that the average doctor reads ten advertisements in his favorite medical journal to one that comes to him in the form of a circular letter, decorated blotter, or more or less ornate calendar. The doctor's waste basket is the receptacle for many an unopened circular letter or brochure from some manufacturing pharmacists; but the medical journal does not go into the waste basket, and its advertising pages are before the eyes of the doctor every time he picks up his favorite medical journal. We say this in the hope that advertisers will appreciate the value of medical journal advertising, though we also say it in the hope that the readers of the medical journals will take an interest in the advertising pages because they help to make medical journals bigger and better.

THE chiropractors in Indiana have had a merry time this winter. In addition to the notoriety secured through their efforts to be legally recognized by the legislature, and considerable free advertising secured from the newspapers, they have encountered a rather unpleasant reputation of having been responsible through ignorance for the death of several people who probably would have been living had the condition been recognized and treated properly. Anyway, the chiropractors are in the limelight and they are making the most of it. Incidentally, there are several hundred individuals in Indiana, many of whom do not possess even a common school education and none of whom know anything about the body in either health or disease, who are making good money in the chiropractic work. Perhaps eventually the public will realize how idiotic and expensive, both in lives and money, it is to place a premium upon

ignorance and incompetency. But as long as the bitter truth has to be learned by experience, and the chiropractors are able to obtain support because they claim to be persecuted when efforts are made to restrict their operations, we can expect a continuation of the inconsistency of placing the health and lives of human beings in the hands of the uneducated and the ill-trained.

Now that the Indiana legislature has adjourned we can breathe a sigh of relief. The chiropractors failed in securing legal recognition, but what do they care for a little thing like that! They are practicing unmolested, and probably will continue to do so. The only thing that will stop their imposition upon the sick and suffering, whom they are shamefully deluding as a result of ignorance and incompetency, is public sentiment, and just now public sentiment is in their favor as a result of the erroneous idea that the chiropractors are being persecuted and that the members of the regular medical profession are jealous of the chiropractors. In the end the public will discover the truth, and, like all other fads and fancies in medical practice which are without rational foundation, chiropractic eventually will be in the discard. In the meantime a lot of gullible people will have to "burn their fingers before they know that the stove is hot," and the worst feature of this whole business of deception and trickery as practiced by the various medical cults that have no rational basis for existence, is that one no more than dies and is forgotten than another rises to take its place. Therefore, in a few years when we do not have chiropractic to contend with we shall have some other fad to attract and delude the sick and suffering public that is just as nonsensical and irrational as chiropractic.

SINCE the close of the war the Government has offered, and has asked us to advertise, several series of certificates of indebtedness bearing somewhat increased interest over that paid upon war bonds. However, persons who remember their experiences in fairly being "brow beaten" into purchasing Liberty Bonds that were represented by the treasury department always to be worth face value and probably go to a premium immediately after the war, only to find the bonds depreciated soon after purchase and remaining so up to the present time, are making no very great scramble now to buy Uncle Sam's certificates of indebtedness. Furthermore, when one contemplates the amount of unnecessary red tape that becomes necessary in order to get a dollar out of Uncle Sam for the payment of any indebtedness, it is not surprising that so many people have a

wholesome fear of any business transactions with the Government. It is unfortunate that such a condition of affairs exists, and it really indicates mismanagement of the worst type. No one should distrust his own government, and he wouldn't if those we put in office to take charge of governmental affairs possessed not only business honesty but business ability as well. We have a habit of placing in charge of our public affairs, even when it means the receipt and expenditure of vast sums of money, men who never did and never will make good with private enterprises. Probably we shall not change our habits, for it is a little difficult to get men of ability and business acumen to take public offices, so in all probability the future will offer little better than we have had in the past.

DURING the past two or three years we have heard a great deal about "group practice" in medicine under various names such as clinics, academies, etc., and such organizations are springing up all over the country in towns of 10,000 or 15,000 as well as in the larger cities. The *Journal of the American Medical Association*, February 12, 1921, in commenting on this subject, asks the question, "Is group practice a menace or a blessing?" and has the following to say on the subject: The development of modern medicine, and especially of scientific laboratory diagnosis, may make necessary some such cooperative plan as these groups are intended to provide. Equipment, laboratory, roentgen ray and the like, which the average practitioner is not able to provide or to utilize satisfactorily, may thus be cooperatively provided. But what of the outcome of this new development? What of the physicians outside the group? Some evidently are seeing the advantages and are forming other groups—perhaps in some instances forced to do so in self-defense! Will not this mean group against group? May it not be one more step toward the complete elimination of the general practitioner—of the family adviser—of him who heretofore has reflected to the public the altruistic motives of the medical profession? Does it mean that the family physician is being replaced by a corporation? Will commercialism or professional altruism control the management of these corporations, or groups if they are not incorporated? In thinking over this matter it is important to look ahead and see what influence this new development may have on the public. How will the average layman view it? Will he not prefer state medicine? We are asking, not answering, the questions—presenting but not attempting to solve the problem; for if we mistake not, it will prove to be a serious one.

If they were built that way, the members of the Council on Pharmacy and Chemistry of the American Medical Association might become discouraged at the apparent indifference of many members of the medical profession to their efforts. There are many physicians who, while figuratively patting the Council on the back, actually do nothing to aid its efforts. On the other hand, there are men in the profession who give the Council active support instead of merely passive appreciation. The letter that follows was written by such a man to a pharmaceutical concern:

"I am receiving circular advertising from you concerning ——— solution, and I am writing to suggest that until these products have been approved by the Council on Pharmacy and Chemistry of the American Medical Association, you are wasting your postage on the practice. Aside from the fact that these products do not appeal to me personally, I feel that I am not in a position to judge the value of such products and I depend entirely on the large clinical opportunities of the Council on Pharmacy and Chemistry of the American Medical Association, in addition to their laboratory facilities, in such matters as these. I may, therefore, with all due respect, suggest that . . . it will pay you to eliminate my name from your mailing list."

The members of the Council on Pharmacy and Chemistry are working week in and week out without remuneration. Few appreciate how much these scientific men are doing for rational therapeutics; fewer still realize how much has been accomplished through their efforts, or how much more could be accomplished if every physician who at least believes in the work of the Council would give it his full support.—*Jour. A. M. A.*, Nov. 6, 1920.

SOME of the doctors who are contemplating attending this year's session of the A. M. A. may be surprised to know that already the hotel accommodations in Boston are fairly well exhausted in consequence of reservations by those who are accustomed to make all preparations long in advance. Probably none of the large cities would have been able to care for this year's session of the A. M. A. any better than will Boston, but we are of the opinion, as expressed in previous years, that the A. M. A. should hold its sessions where there can be no question about having the visitors cared for in a satisfactory manner. To be told along in January and February that all hotel accommodations for the first week in June have been sold, and that prospective attendants at the A. M. A. session must depend upon the chance of getting into a boarding house or private residence, is not very comforting news nor does it conduce

to a satisfactory attendance at the session. Atlantic City is the one and only place on this continent where hotel accommodations are ample and where conventions can be cared for properly. It is unfortunate that Atlantic City is not more nearly the center of population, but we of the middle west, and perhaps even those in the far west, would rather travel a little farther and pay a little more in traveling expenses and be assured of comfortable and convenient hotel accommodations after arriving at the convention. By all means let us get over this silly idea that a large association like the A. M. A. must go from city to city whether or not suitable accommodations for the session can be secured. When cities can offer the needed facilities for a large convention it is all right to consider their bids for patronage. Otherwise a location should be secured that offers suitable facilities no matter where such location may be. What is true of the A. M. A. also is true of our Indiana State Medical Association. Migration is an excellent thing, all things being equal, but it is a bad thing when adopted purely with the idea of giving the members a change and benefiting some particular locality.

We have no desire to play the part of an alarmist and yet we cannot help feeling that the medical profession is drifting toward the rocks and in a very short time will meet with grave disaster. We have in mind particularly the growing tendency toward socialism in medicine which is being promoted from outside of the ranks but unfortunately is encouraged by a lot of unthinking persons within our ranks. Health insurance, free venereal clinics, hospitals under federal, state, or municipal control, and clinics maintained by industrial concerns, insurance companies, and benevolent associations are but entering wedges which eventually will result in state medicine and the elimination of private practice. It is not difficult to understand that without competition and the incentive to progress there will come a lessening of the benefits to be derived from such a changed order of things, but there is another phase of the question which is worth serious consideration and that is the economic annihilation of a profession that is not deserving of such fate. We have been too ready to give of our time and talents to public welfare without hope of reward and we have been virtually "easy marks" when it came to giving our support to "up-lifting" schemes of questionable benefit to the public and disastrous to our own welfare. In consequence we have been met everywhere with scant consideration when we have asked or expected any consideration which has meant improvement in our own condition. Probably in its death struggles the medical profession will put up a

vigorous fight, but then it will be too late. The time to save the medical profession from annihilation is at present when we might, if united and active, defend our position successfully, and definitely fix our position in society as not only benefactors of the human race but our work as deserving of encouragement and support as individuals as well as a profession. It will be a sorry day for the people and a sorrier one for medical men when all human ills and physical abnormalities are subjected to the machinery of paternal attention given through the medium of state medicine, and all medical men are subjected to bureaucratic control and management.

THE Medical Department of the University of Michigan has proposed a plan whereby the state of Michigan enters into the private practice of medicine and surgery through the doors of the University. The surprising feature of the proposition is that it has the endorsement of a few salaried medical men who probably think that they would profit in consequence of the adoption of the plan. The clinics at the University of Michigan always have been a thorn in the flesh of the medical profession, in view of the practice of accepting patients irrespective of ability on the part of the patients to pay for the services rendered. A millionaire from Indiana, who pays no taxes in Michigan and does not contribute anything to the support of Michigan's institutions, can go to the University of Michigan clinics and secure gratuitous services and be on the same plane with the taxpayers of Michigan who have the same privilege. It is a rank injustice, but not content with the furnishing of gratuitous medical and surgical services in the University clinics, the plan now is proposed to take the clinics to the various sections of the state, to be operated by the salaried professors of the University and to enter into direct competition with the local medical profession. It is evident that this scheme to establish state medicine in Michigan will have considerable opposition, because already the medical men of Detroit have placed their seal of disapproval upon the project by a series of resolutions which are as follows:

"RESOLVED: 1. That any plan or intention on the part of the authorities of the University of Michigan to construct and use any part of any university hospital for the treatment of patients able to pay for medical or surgical services meets with our entire disapproval. (2) That to charge patients in the university hospitals or any other state hospital or institution for medical or surgical services rendered to them by employees of the state is a dangerous and vicious proposal and should meet with no approval

from any social group in this commonwealth. (3) That it is the opinion of this society that a high standard of medical education can be secured and maintained in the University of Michigan, both in its class rooms and its hospitals, by means other than those that are now proposed by its faculty, and in such a way as to be to the advantage of both the medical profession and the community itself."

Perhaps those who are proposing the new plan may have the support of the politicians of the state, and if so we may look for a merry time in Michigan, with the rank and file of the medical men fighting for their lives. It is bad enough to be obliged to fight state medicine from outside the ranks without having to fight it within the medical profession. We are beginning to think that it would be a good thing if some of the professors in our universities, who possess a rather exalted opinion of their abilities and position and who seem ever ready to sacrifice the economic standing of the medical profession for their own personal advantage, could be dethroned. In fact a house cleaning once in a while is a good thing, and some of the professors in our medical colleges, and others connected with various branches of public health service who are using their influence secretly or openly in behalf of state medicine, deserve to be driven from their positions.

DEATHS

BENJAMIN F. HOLMES, M.D., retired physician of Indianapolis, died February 19, aged 72 years.

JOHN H. HAYDEN, M.D., of Bethel, Delaware county, died February 13, aged 80 years. Doctor Hayden graduated from the Curtis Physio-Medical Institute, Marion, in 1885.

WILLIAM B. GILLIATT, M.D., Young Creek, Orange County, died in Lafayette, February 1, aged 72 years. Doctor Gilliatt graduated from the Cincinnati College of Medicine and Surgery in 1871.

JACKSON DAVID HORTON, M.D., Paoli, died February 1st at the Deaconess Hospital, Louisville, Ky. He was 61 years of age and graduated from the University of Illinois College of Medicine in 1884.

SARAH IRELAND, of Columbia City, widow of the late Doctor Martin Ireland and mother of Surgeon-General Merritt W. Ireland, died February 12 at the Illinois Central Hospital of Chicago. She was 92 years of age.

WILLIAM H. BAKER, M. D., Terre Haute, died January 23 at Chicago, aged 63 years. He graduated from the Hahnemann Medical College and Hospital, Chicago, in 1882, and had practiced medicine in Terre Haute twenty-five years.

MELVIN H. YOUNG, M.D., aged 63 years, died January 19 at Brazil. Doctor Young graduated from the Medical College of Indiana in 1892 and was a member of the Clay County Medical Society and the Indiana State Medical Association.

LOREN A. HYDE, M.D., aged 51 years, former superintendent of the Julietta Hospital for the Insane, died February 3 at his home in Indianapolis. Doctor Hyde graduated from the Medical College of Indiana in 1897. He was a member of the Marion County Medical Society and the Indiana State Medical Association.

THOMAS W. BULLETT, M.D., formerly practicing physician of Rivervale, Lawrence County, Indiana, died February 12, of arteriosclerosis, at Louisville, Ky. Doctor Bullett graduated in medicine from the Cincinnati College of Medicine and Surgery in 1874 and from the Hospital College of Medicine, Louisville, Ky., in 1875.

JOHN H. FORREST, M.D., Marion, died very suddenly February 6. Doctor Forrest graduated from the Chicago College of Medicine and Surgery, School of Medicine of Loyola University, in 1880 and had practiced medicine in Marion since the time of his graduation. He was a member of the Grant County Medical Society and the Indiana State Medical Association.

OWEN WALTER OWENS, M.D., died February 5 at his home in Muncie, aged 52 years. Doctor Owens graduated from the Chicago Homeopathic Hospital in 1897 and had practiced medicine at Muncie for the past twenty years. He was an active member of the Muncie Academy of Medicine, Delaware-Blackford Medical Society, the Indiana State Medical Association and the American Medical Association.

AUSTIN IRA DONALDSON, M.D., Washington, died February 27 of typhoid fever, aged 47 years. Doctor Donaldson was born in Daviess county in 1874, graduated from the Medical College of Indiana in 1903, practiced in Otwell for one year, then removed to Washington, where he has practiced continuously since. He was secretary of the Daviess County Board of Health and the Daviess County Medical Society, and was an active member of the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. H. H. MARTIN, Laporte, has been elected president of the local Kiwanis Club.

THE New Randolph County Hospital was formally opened to the public on February 1.

DR. A. L. MARSHALL of Indianapolis, who has been attending eye clinics in New York, returned and resumed practice March 1.

PLANS are under way for the erection of a new wing at the Julietta Hospital for the Incurable Insane, to provide for the overflow of patients.

DR. JOHN STANLEY BROWN of Sullivan, recently graduated from the Cincinnati Medical College, has located at Carlisle for the practice of medicine.

DR. WILLIS W. CAREY, Fort Wayne, announces the opening of offices at the Lutheran Hospital with practice limited to nervous diseases and physio-therapy.

DR. GEORGE H. JONES, for the past four years secretary of the Missouri State Board of Health, has resigned and severed his connection with state health activities February 1.

THE State Senate has passed a bill, by a vote of 31 to 5, appropriating \$225,000 for the erection of a new hospital and kitchen at the Indiana Soldiers' Home at Lafayette.

ON March 2, the *New York Medical Journal* in its 78th year was converted into a semi-monthly publication. It also has been enlarged and some other improvements added.

PHYSICIANS of Marion on February 1 organized the Marion Medical Academy. Dr. G. G. Eckhart was named temporary chairman and Dr. Edwin Harrold, secretary-treasurer.

PROFESSOR WILLIAM T. SEDGWICK of the Massachusetts Institute of Technology, Boston, died on January 25 terminating a career of almost 45 years spent in the interest of public health.

THE *Charlotte Medical Journal*, published at Charlotte, N. C., has changed its name to *Southern Medicine and Surgery*. Drs. M. L. Townsend and J. C. Montgomery are editors of this medical journal.

DR. STANLEY A. CLARK of South Bend announces the addition of radium to his laboratory equipment in addition to diagnostic work. The laboratory is now equipped for efficient radium and x-ray therapy.

DR. ERVIN WRIGHT, for many years a practicing physician of Huntington, but who for the last two years had been located at Rolla, Missouri, has returned to Huntington and opened offices in the Hague Block.

THE *American Journal of Psychology*, established in 1887 by Dr. G. Stanley Hall and since edited by him, has been acquired by members of the department of psychology of Cornell University and will hereafter be edited by Professor E. B. Titchener.

DR. CHARLES P. EMERSON of Indianapolis was one of the speakers at the annual Congress of Medical Education, Licensure Hospitals and Public Health held March 7 to 10 at the Congress Hotel, Chicago. Doctor Emerson's subject was "Medicine and Medical Specialties".

As a memorial to the late General W. C. Gorgas and in recognition of his achievements in preventive medicine, Dr. Belisario Porras, President of the Republic of Panama, has proposed the foundation of an institute of tropical and preventive medicine in connection with the Santo Tomas hospital at Panama.

DURING February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Armour & Co., Corpus Luteum Tablets, 5 grains; David B. Levy, DuBois Iodoleine, Injectable, Ampoules, 2 Cc.; E. R. Squibb & Sons, Fat-Free Tincture Digitalis.

THE Senate added \$1,200,000 to the appropriations for the construction of hospitals for wounded and disabled soldiers during its debate on the Sundry Civil Bill. The hospital at Fort Bayard, N. M., was allowed \$750,000; the Marine hospital at Evansville, Indiana, \$100,000, and the Marine hospital at Pittsburg, \$350,000.

MME. MARIE CURIE, the discoverer of radium, will visit the United States in May as the guest of Mrs. William Brown Meloney, editor of the *Delineator*. A reception committee of prominent physicians, who are engaged especially in radium work, has been appointed under the chairmanship of Dr. Francis C. Wood, of New York.

DURING the year 1920 the birthrate in France took a big jump upward and for the first time in many years births largely exceeded deaths. Detailed figures for the first six months of the year for all France including Alsace-Lorraine and the liberated departments show 424,668 births against 356,722 deaths, or nearly 68,000 more births than deaths.

DR. ERIC CRULL, Fort Wayne, has been elected and accepted position as superintendent of the Irene Byron Tuberculosis Hospital of Allen County, to succeed Dr. James A. Price, who has been in charge since the hospital was opened in 1919. Dr. Price has accepted a position as superintendent of the Memphis Tuberculosis Hospital, Memphis, Tenn.

THE staff members of the City Hospital, Indianapolis, met January 28 and organized a society to be known as the Staff Society of the Indianapolis City Hospital. A constitution and by-laws were adopted and officers were elected as follows: President, Dr. Harry L. Foreman; vice-president, Dr. Carl McCaskey; secretary-treasurer, Dr. William E. Gabe.

AT a special meeting of the central committee of the American National Red Cross held January 29, Mr. W. Frank Persons was elected vice chairman in charge of domestic operations in which capacity he will have jurisdiction over all matters concerned with the operation of the program of the Red Cross in this country. Mr. Persons assumed duties of his office February 1.

THE International Hygiene Congress, which was to have been held in Geneva, Switzerland, next May, has been abandoned. Six hundred delegates from all parts of the world were expected to attend, but on account of the low value of the currency of many countries and the high value of the Swiss franc, it was impossible to get Germany, Austria, Hungary, Czechoslovakia, Yugoslavia, Poland, Romania, and Bulgaria to send delegates, while it was also difficult even for France, Italy and Belgium.

THE New York Post-Graduate Medical School and Hospital announces that there will be available this year six scholarships under the

terms of the Oliver-Rea Endowment. The purpose of the endowment is to award scholarships to practicing physicians of the United States to defray in full the expenses of tuition at the New York Post-Graduate Medical School. Applications may be sent to the president of the New York Post-Graduate Medical School and Hospital, 20th Street and 2nd Avenue, New York City.

PLANS for a children's state hospital in memory of James Whitcomb Riley took definite shape at a meeting at the Claypool Hotel, Indianapolis, February 2. It is proposed to ask the legislature for an appropriation of \$250,000 for the construction of a children's hospital building with a maintenance and equipment fund of \$150,000 a year for two years, after which the maintenance fund would be reduced to \$50,000 a year. The hospital probably would be located in Indianapolis on a site near the Robert W. Long hospital.

THE Faculty of Medicine of Paris has arranged a course in Ophthalmology to be given at the Hotel Dieu by Professor F. de Laperonne assisted by Associate Professors Terrein and Guillemont, Dr. Hautant, Otorhinologist to the hospital, and Dr. Velter, Dr. Prelat and Dr. Monbrun, chiefs of the clinic and the laboratory. This course will begin on May 10 and will be continued every day through the months of May and June. It will consist of clinical examinations, practical work in operative medicine and laboratory demonstrations.

A CONFERENCE of physicians representing various clinics in Indiana was held at Newcastle on February 10, the Newcastle clinic acting as hosts. Representatives from Brazil, Garrett, Laporte, South Bend, Terre Haute, Warsaw and Wabash were present. Drs. F. M. Whistler, Wabash, M. E. Klingler, Garrett, and F. M. Miller of Laporte were named as a committee to draft a constitution for the Indiana Medical Clinic Society, which will be officially organized at Indianapolis at the annual session of the Indiana State Medical Association.

PLANS are being perfected for the annual American Medical Golfing Association tournament—an entertainment feature at the annual convention—to be held June 6 at the Commonwealth Country Club. Drs. Franklin Newell, Walter Lancaster and Harold Tobey constitute the local (Boston) committee in charge. The American Medical Golfing Association is open to all Fellows of the A. M. A. in good standing. Full information may be obtained from Dr. Will Walter, 1414 Chicago Avenue, Evanston, Ill., who is secretary of the Golfing Association.

DR. WILLIAM A. KEEN of Philadelphia, on the occasion of his 85th birthday, January 20, was given a testimonial dinner in the Bellevue Stratford Hotel, Philadelphia, which was attended by many representative physicians and surgeons from all over the United States. A life size bronze bust of Doctor Keen was presented to him on behalf of the medical, civic and other organizations of many states. Doctor Keen has served as a medical officer in three wars and last fall presided over the International Congress of Physicians and Surgeons in Paris.

J. MACE ANDRESS in his book, "Health Education in Rural Schools," gives the following list of questions to be used as a guide by every school nurse and physician in determining the health condition of each child under his or her care: (1) Does he breathe well? (2) Are his teeth in good condition? (3) Is he too pale? (4) Has he a persistent cough? (5) Has he a running nose or running at the ears? (6) Has he any skin trouble? (7) Has he any swelling about the neck? (8) Are his sight and hearing normal? (9) What is being done to interest him in forming good health habits?

Up to February 15, thirty-five cases of typhus had developed among passengers taken from the steamers *Presidente Wilson* and *San Giusto* to Hoffman's Island, New York, and another case was discovered in a young man who had frequented the steamship docks in Brooklyn. Three of the patients have succumbed to the disease. Special precautions have been adopted by the United States Public Health Service to prevent further importation of the disease and a twelve day quarantine of immigrants from certain foreign points will be maintained at all ports where quarantine is under federal control.

ANNOUNCEMENT has been made that the annual convention of the American Hospital Association will be held at West Baden Springs Hotel, West Baden, from September 12 to 17. This association includes both the association of the United States and of Canada, and an attendance of 1000 to 1200 is expected, which will include hospital superintendents, trustees and surgeons. Major-General Wood will be on the program. A feature of the convention will be an exhibit of hospital equipment and supplies and all modern improvements in surgical apparatus. In connection with the exhibit the Social Service Departments will demonstrate their various lines of work.

THE annual meeting of the Elkhart County Medical Society was held in the Elks' Temple, Elkhart, on February 4. Speakers on the program were Dr. Andre Crotti, Cincinnati; Drs. Albert B. Yudelson, Joseph DeLee and Walter H. O. Hoffman, Chicago; Dr. A. M. Mendenhall, Indianapolis; Dr. G. W. McCaskey, Fort Wayne; Drs. M. W. Lyon, F. R. Clapp, Milo K. Miller and R. V. Hoffman, South Bend; Drs. S. C. Wagner, E. M. Hoover and J. C. Fleming, Elkhart; Dr. B. F. Teter, Middlebury; Dr. W. D. Price, Nappanee; Dr. A. G. McDonald, Warsaw, and Drs. A. C. Yoder, M. K. Kreider, F. M. Freeman, E. E. Ash, Goshen. Dinner was served at 6:30 in the Elks' Temple.

UNDER the auspices of the American Ophthalmological Society the Ophthalmic Section of the A. M. A. and the Academy of Ophthalmology and Oto-Laryngology, an International Congress of Ophthalmology will be held at Washington, D. C., April 18 to 22, 1922. The officers of the temporary organization are as follows: President, Dr. George E. de Schweinitz, Philadelphia; vice-president, Dr. Edward Jackson, Denver; secretary and treasurer, Dr. Luther C. Peter, Philadelphia; chairman of committee on organization, Dr. Edward C. Ellett, Memphis, Tenn.; on scientific progress, Dr. Edward Jackson, Denver; on finances, Dr. Lee M. Francis, Buffalo; on arrangements, Dr. William H. Wilmer, Washington, D. C., and on membership and credentials, Dr. Walter R. Parker, Detroit.

UNDER the direction of the recently organized Eye Sight Conservation Council, a nation-wide "Save Your Sight" campaign is to be conducted. The aim of the campaign is to acquaint the public with the importance of eye care and to urge the universal eye examinations of school children, workers in industries and clerks in stores and offices. Special literature will be sent to teachers, employers, and those especially interested in the advancement of efficiency and welfare in industry. Charts and posters are to be placed in school rooms and factories, visualizing eye care, depicting the advantages of correcting ocular defects, and warning against eye strain and its attending evils. The Eye Sight Conservation Council is a membership organization, the directors and councilors of which are professional men representing various organizations devoted to health welfare, education, science and industrial betterment. Dr. Cassius D. Wescott of Chicago is vice-president and Dr. Frederick R. Green, Chicago, Dr. W. S. Rankin, Raleigh, N. C., and Dr. Allen McLoughlin are members of the Board of Councilors.

THE *Journal of the A. M. A.* in its issue of February 19 makes the following comment on

the medicinal use of whisky in the United States:

"Things are not always what they seem," says the poet. And in the world of practical affairs, general statements, even oft repeated and popularly accepted, do not always check up with the facts. Much has been made of the claim that the adoption of federal prohibition has seriously interfered with the use of whisky for medicinal purposes by physicians. The Anti-Saloon League of Delaware, in a recently issued circular, presents an interesting table on this question, based on information furnished by federal and state officials and statistics taken from the American Medical Directory. According to this tabulation, there were, at the time the federal prohibition amendment was adopted, twenty-four states—one-half of the entire number—whose laws forbade either the writing or the filling of prescriptions for whisky or brandy. In these states naturally no permit under the federal law could be issued to physicians. In the remaining twenty-four states, in which there is no such law and in which, under the Volstead act, permits to prescribe whisky may be issued to physicians, there are, according to the *American Medical Directory*, 112,238 practicing physicians. Yet in these twenty-four states, only 33,379 physicians—29 per cent—have taken out permits. Evidently, the remaining 71 per cent do not regard whisky as of enough value in the practice of medicine to go to the trouble of taking out a permit.

CORRESPONDENCE

NEWS FROM DR. G. W. H. KEMPER

395 North El Molino Ave.,
Pasadena, Cal., Feb. 15, 1921.

DEAR DOCTOR:

The January number (1921) of *THE JOURNAL* came to hand in due time. I tell you it makes you feel like saying "Good morning" to an old friend when the postman leaves *THE JOURNAL* at your door.

Well, I am gaining slowly, and hope as summer is fully established that I will be in old time condition.

This is a remarkable country. Summer prevails in the day time, when the sun shines, and winter at night. We had a very heavy frost this morning, but it did not hurt anything. With us, such a frost would freeze and kill everything green.

An old gentleman "blew in" here a few days ago from northern Minnesota; someone had told him it was warm here. He stood it for two nights when he declared, "It was the coldest place he had ever found."

Dr. Dwight M. Green, formerly of Muncie, is nicely located at Los Angeles. He has secured a nice little home at 861 West 41st street, office, 701 Marsh-Strong Building. He is doing well.

Dr. L. L. Ball, of Muncie, is here for the winter with his wife and daughter. They are caring for Mrs. Mock, of Ann Arbor, Michigan, an invalid sister of Doctor Ball.

Your friend,

G. W. H. KEMPER.

SOCIETY PROCEEDINGS

110 PERCENT CLUB				
No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	83
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	12
4.	Carroll	Eva N. Kennedy	20	22
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	24
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	26
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	10
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13

INDIANA STATE MEDICAL ASSOCIATION COUNCILORS' REPORTS

To the Indiana State Medical Association:

I submit herewith the councilors' reports concerning the activities in the respective counties for the year 1920. Not at all differing from previous reports, you will notice that many societies and some entire districts have made no report to me, and, I am, therefore, obliged to publish the following incomplete returns.

In order to save expense in tabulation, I have listed the name of the county followed by four figures, the first representing the number of meetings held during the year; second, average attendance; third, number of scientific papers presented; fourth, number of case reports. To anyone really interested, the additional work in deciphering this report will not be any hardship.

FIRST DISTRICT:

County—				
Gibson	2	20	3	0
Pike	3	5	2	2
Posey	1	7	1	1
Vanderburg	24	20	20	75
Warrick	4	6	4	0
Spencer	2	6	2	0
Perry	8	7		

FOURTH DISTRICT:

Dearborn-Ohio	2	10	1	0
Jefferson	5	6	3	5
Jennings	8	5	4	40
Jackson	8	7	4	8
Bartholomew	9	9	7	6

FIFTH DISTRICT:

Vigo	18	32	17	4
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SIXTH DISTRICT:

Wayne	6	..	5	2
Union	3	..	4	0
Fayette	11	12	0	0
Rush	4	10	3	0
Shelby	6	..	0	0

SEVENTH DISTRICT:

Johnson	15	12	3	25
Hendricks	4	12	4	4
Marion	32	77	51	26

EIGHTH DISTRICT:

Madison	9	20	7	2
Delaware-Blackford	14	35	12	12
Jay	10	10	..	..
Randolph	10	9	9	15

NINTH DISTRICT:

Howard	9	12	8	20
Tipton	..	..	..	..
Hamilton	6	8	6	15
Clinton	7	10	4	2
Boone	0	0	0	0
Montgomery	4	20	4	0
Tippecanoe	10	25	5	28
Fountain-Warren	5	12	10	4

TENTH DISTRICT:

Jasper-Newton	12	13	22	..
Lake	8	17	10	1
Beuton	5	9	3	8

ELEVENTH DISTRICT:

Grant	12	20	14	..
Huntington	11	11	10	3
Wabash	9	12	4	6
Miami	5	8	5	2
Cass	4	16	6	2
Carroll	9	..	8	..

TWELFTH DISTRICT:

Adams	12	7	10	35
Wells	15	10	8	..
Allen	36	24	32	..
Whitley	7	8	1	8
DeKalb	6	12	8	10
Noble	4	15	8	3
Steuben	8	7	3	10

CHARLES N. COMES, Secretary.

JASPER-NEWTON

The regular monthly meeting of the Jasper-Newton Medical Society was held at the home of Dr. L. H. Recher, in Morocco, February 25. Twenty members of the total twenty-six were present.

Dr. I. A. Abt of Chicago presented the subject, "Care of the Infant and Mother". He recognizes but few necessary reasons for taking a baby from the breast—acute febrile diseases as typhoid fever and erysipelas, tuberculosis and epilepsy; that while many mothers have insufficient milk for a time, or apparently for a time, the baby will not increase in weight as the family grandmothers and friends might desire, yet if we will keep persistently at it, can develop the breasts until a sufficient amount of milk and of a good quality will be produced. He emphasized the fact that in some manner nursing the breast transfers an immunity to the baby against disease. He would give the mother perfect freedom to eat what she wants. These were only a few of the almost hundreds of facts that Doctor Abt contributed from his ripe experience.

Everyone present expressed the opinion that this was one of the most profitable meetings ever held by the Jasper-Newton Society. After the program the hosts, Dr. and Mrs. Recher, served a bounteous dinner to the members and visitors, during which hour the seriousness of our reconstruction period was forgotten.

O. E. GLICK, Secretary.

MUNCIE ACADEMY OF MEDICINE
December 17, 1920

Friday evening at 6:15 the members of the Muncie Academy of Medicine, with 37 invited doctors from nearby cities, met at the New Kirby Hotel for dinner and to hear Dr. A. W. George of Boston speak on "The Value of the Roentgen Ray Diagnosis of the Pathology of the Biliary Passages."

Doctor George is a pioneer in this work. He spoke very convincingly concerning the possibilities of the Roentgen ray relative to the gall bladder and biliary tracts. He stated that the x-ray was coming more into general use, due largely to the fact that the interpretations are better, as a rule, than formerly. Dr. George presented many pictures reproduced from x-ray plates showing pathological conditions about the gall bladder which had been diagnosed with the Roentgen ray and confirmed by the surgeon at operation.

There was a very liberal discussion by Drs. Eckhart and Fankbouser of Marion, Dr. Tom Jones of Anderson, Drs. Reed and Zellers of Union City, Drs. Mix, Fair and Spurgeon, and many other doctors present.

January 14, 1921

The Muncie Academy of Medicine met at the New Kirby Hotel at 6:15 p. m. for the weekly meeting. Minutes of previous meeting read and approved. Letter from Dr. C. O. Daniels was read thanking the Muncie Academy for hospitality shown the doctors of Mariou and requesting copy of constitution and by-laws of the Academy.

CASE REPORT:—*Banti's Disease*—DR. W. J. MOLLOY.

Patient, R. F., entered hospital Sept. 1, 1920, age 33; single; occupation, farmer. Had measles in childhood and typhoid fever at age of 21. Had rheumatism in knee joints in 1917. Complained of rheumatism of knee joints when first examined. Few days after admittance began to have vomiting of blood and severe dysentery and bloody stools. This condition continued five or six weeks, when he began to improve. Short time after recovery from dysentery and vomiting of blood, began to have ascites; required tapping several times. Spleen was enlarged. Blood examination Sept. 15, 1920, as follows: Hemoglobin, 70; erythrocytes, 4,680,000; leucocytes, 7,400; Polys, 73; lymphocytes, 20; large monoculurs, 6; eosinophiles, 1. Basis for diagnosis in this form of splenic tumor with anemia is: advanced stage of anemia, ascites, subicteroid discoloration of the skin, and the blood picture. Patient is still living.

PAPER:—"Glaucoma"—DR. W. H. HOLLIS.

Abstract:—Glaucoma is essentially due to damming or blocking of drainage from interior of eye and is characterized by increase in intraocular tension and gradual or sudden impairment or loss of vision. It appears as an inflammatory eye disease attended by severe pain and congestion and redness of eyeball and blurring of sight. Anterior chamber becomes shallow, pupil dilated and often oval or egg shape. Mobility is sluggish or may be totally inactive. Rare for all pupillary symptoms to be absent. Eventually loss of vision becomes permanent. Pain which is mild in first attacks becomes unbearable in later attacks. Cornea hazy and becomes insensible to touch. Disease progresses until there is complete disorganization of structure. Lens becomes opaque, iris atrophic. Enucleation or evisceration frequently the only measure that will relieve suffering and make it safe for the other eye.

Iritis: Hard or quite impossible to separate iritis from cyclitis for the reason that the iris springs from ciliary body and both are nourished by the same blood supply. Symptoms appear gradually beginning with an itching or slight discomfort of the conjunctiva. Later pain of mild degree and photophobia and still later increase of pain especially at night. Much inflammation, especially at sclero-corneal margin. Must differentiate this condition from conjunctivitis. Can easily be done by using adrenalin. This drug will not bleach the deep seated injection at the pericorneal zone. Must not confuse with glaucoma because of the unequal effects of atropin in this condition. Pupil is always contracted, due to engorgement, edema, spasm and sometimes adhesion of the anterior capsule of the lens. Iritis, even though it is primary or secondary in the majority of cases, is due to microorganisms or their toxins. Infectious iritis due to *treponema pallida* (about 50 percent) gonococcus and streptococcus (giving the so-called rheumatic iritis) tubercle bacilli and other organisms. Metallic iritis due to diabetes, gout and hyperthyroidism. In this latter class the altered metabolism may only lower resistance and the iritis be the result of microorganisms or their toxins.

January 21, 1921

Dr. C. M. Mix reported a very interesting case of a child 9 months of age having swallowed a safety pin. X-ray showed the pin to be at the level of the seventh cervical vertebra, open, and the point pointing upward. Dr. Mix was successful in "Chevalier Jacksoning" it out with an ordinary hemostat and with no anesthetic.

PAPER:—"Diagnosis and Treatment of the Obstructing Prostate"—Dr. H. G. HAMER, Indianapolis.

Abstract: Gradually increasing frequency of urination, particularly at night, in a man past fifty, should suggest prostatic obstruction. Rectal palpation and the use of the catheter, supplemented by cystoscopy, render diagnosis fairly exact. Palliative treatment usually becomes preparatory treatment for removal of growth. Early operation is advisable before permanent bladder and kidney changes have taken place. Prostatectomy is seldom an emergency operation. Temporary relief can usually be given, and operation undertaken whenever conditions are favorable. Suprapubic operation is the one of choice. Prolonged preparatory treatment with careful estimation of the patient's fitness for operation, judicious choice of plan of operative procedure, selection of proper anesthetic and good postoperative nursing all contribute to good results.

DELAWARE-BLACKFORD

January 7, 1921

The Delaware-Blackford Society met at the New Kirby Hotel on Jan. 7, 1921. Meeting called to order by Dr. C. A. Sellers, President. Minutes of the previous meeting read and approved. Dr. H. D. Fair gave the financial report for last year showing the society to be in excellent condition. Along with a neat balance in the bank is a Liberty Bond which he was successful in obtaining for the society during his eight years as its secretary. A vote of thanks was given him for the excellent service rendered in this capacity. Dr. Jump reported the expenditures for the annual and very successful banquet which had been given the 10th of the preceding month. Chas. A. Sellers, S. G. Jump and R. H. Beeson were appointed as the program committee for the year.

CASE REPORTS:

Case—*Nephrolithiasis*—Dr. W. C. MOORE.

R. W., male; white; age 24; intermittent hematuria, pain in abdomen, back and sometimes in testicle; fever; cystoscopic examination showed pus coming from right kidney. Stones shown by x-ray. Right kidney removed; 84 stones removed varying in size from pin head to one-half inch in diameter. Stones varied in shape, some being spiculed, others like a cocklebur and black in color. Patient had tried to connect his condition with an injury received by falling in lifting a heavy barrel.

Case—*Foreign Body*—Dr. I. N. TRENT.

Patient complained of an enlargement of left thumb. Gross appearance was somewhat like sarcoma or a thick walled cyst. Piece of steel 5/16 by 1/8 inch removed. The steel was surrounded by fluid. Had been there for 25 years.

Case—*Double Kidney, right side with two ureters*—Dr. F. E. HILL.

Woman, age 45, had had cystitis for many years. Cystoscopic examination showed three ureters emptying into bladder, one from left kidney and two from right kidney.

Dr. H. A. Cowing read a very interesting paper on "Obstetrics and Public Health".

R. H. BEESON, Secretary.

TIPPECANOE COUNTY

Regular meeting called to order at Hotel Lahr, January 25, by President McClelland. Minutes of last meeting read and approved without change.

Under clinical cases Dr. Shafer stated that the child with inoperable sarcoma, reported last meeting, was still alive and pert, that the laboratory reported nil because of unsatisfactory sample.

At this stage the regular order of business was suspended and Prof. C. B. Jordan read a paper on "The Effect of Hydrogen-Ion Concentration and of Oxidation on the Toxicity of Arsphenamine and Neoarsphenamine."

Synopsis: Subject interesting because committee on Revision of U. S. P. requires some chemical test must be accepted before product can be incorporated in U. S. P.

Data for following conclusions obtained by experimenters of the Public Health Service.

The parasite trypanosomia equiperdum was used on rats because infection limited to blood (not in tissues), easily propagated, runs a regular course and can be accurately followed by counting the number of parasites.

Experiments were made with the following objectives: Minimum effective, minimum lethal, and maximum toleraut doses by using 50 percent increasing doses, as: 1 Cc., 1.5 Cc., 2 Cc., etc. Within certain limits the process proceeded by a definite rate in lethal and effective doses.

Subeffective doses produce no clinical results probably because dose not large enough to overcome the reaction of the parasites, or because the body absorbs part of the dose.

Trypanocidal action of arsenic compounds: Trivalent compounds are much more toxic to both host and parasite than pentavalent compounds.

All arsenical preparations must be changed to trivalent *oxides* before exerting their principal toxic or trypanocidal action. The parasites are not reduced in numbers until after a latent period probably due to time required for the body to produce an oxidation process. These oxidation products of arsphenamine and neoarsphenamine are toxic to both host and parasite. The oxidation product of arsphenamine is seven times as toxic on rats as arsphenamine itself, and the oxidation product of neoarsphenamine is ten times as toxic as neoarsphenamine itself. In test tube experiments the arsphenamine or neoarsphenamine do not kill the parasites even in strong solutions; the theory being that oxidation products formed in the body are the agents that destroy the parasites.

Arsphenamine hydrochloride is stable in air, but the addition of an alkaline solution leads to a rapid rate of oxidation, especially when shaken in air. Neoarsphenamine rapidly oxidizes on mere exposure to air, amounting to 50 percent in ten minutes. Arsphenamine is absorbed slower and excreted slower than neoarsphenamine, therefore it is retained in the tissues longer. It is supposed to be more effective in syphilis (where the parasites are deep seated in the tissues instead of in the blood), because of this prolonged action. The only advantage attributed to neoarsphenamine is the greater latitude between minimum effective dose and minimum lethal dose; but to counterbalance this is its greater instability towards oxidation and its consequent danger of increased toxicity, and its lesser effectiveness in human syphilis.

Neoarsphenamine is less active therapeutically, but this difference is compensated by a more toleraut dose; it creates less commotion in the blood.

As shaking and exposing to air alkaline solutions of arsphenamine, and aqueous solutions of neoars-

phenamine rapidly renders them highly toxic, they should be used immediately in order to anticipate oxidation, or toxicity.

These experiments also showed that cacodylic acid does not possess any trypanocidal action even in lethal doses.

DISCUSSION

DR. CROCKETT:—"Does light make any difference?"
Answer:—"Practically it does not. All these experiments were made in air."

DR. PYKE:—"How long does it take neosphenamine to be eliminated from the body? It is absorbed quicker and eliminated quicker, therefore we should know the time consumed in order to know how often to give. Some trade packages didn't dissolve properly, leaving oily-like particles. These were not used and were replaced by the trade.

DR. CROCKETT:—"Practically all makes give same results. At first some preparations didn't go into solution properly, later worked better because more familiar. Few cases develop acute arsenical poisoning, some cases at first no reaction, but gradually get more sensitive.

PROF. JORDAN:—"Probably accumulative effect. As I have no clinical experiences these remarks are very interesting, but am sorry that cannot answer clinical questions.

DR. BAUER:—"One case after fourth dose developed exfoliative dermatitis lasting for three months. Some trade member suggested to test for idiosyncrasy by first using sodium cacodylate and if reaction produced, don't use the arsenical preparation (arsphenamine or neosphenamine).

DR. HUNTER:—"Water for solution should be boiled or distilled immediately before using in order to get all air out.

The society in regular manner extended a rising vote of thanks to Prof. Jordan for his excellent paper.

NEW BUSINESS

Dr. Kern of the milk committee reported the state inspector had investigated many samples. That they were all within the law. That there was no law against using condensed milk, reconstructing it, and selling it as milk. That condensed milk was sold openly and fearlessly. This milk was prepared by removing the cream, substituting coconut oil, condensing, shipping in great bulk to our dealers, where it is reconstructed and sold as pure milk, passing the butter fat test. That 48 percent of the milk supply of Indiana is illegal. Eighteen places in Lafayette were serving illegal milk.

Dr. Hupe moved, "That the next meeting be entirely devoted to the milk question, that a suitable program be procured and that we make it a meeting open to the public." Carried.

Adjourned: Present—Members 18, visitors 2.

WM. M. RESER, Secretary.

UNION COUNTY

The Union County Medical Society met in the Public Library, Liberty, February 2, with every member present. The evening was devoted to the discussion of two important subjects, Convulsions in Children, and Earache.

Every member of the county society is in good standing in the State Association, and with Dr. J. D. Shonwald of College Corner as president and Dr. E. R. Beard of Liberty as secretary the society is starting out with bright prospects for a prosperous and useful year.

The Union District Medical Society of southeastern Indiana and southwestern Ohio will meet at Liberty with the local society April 28. About one hundred physicians are expected to attend this meeting, which has met every six months for the last fifty-five years.

E. R. BEARD, Secretary.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

GLOVER'S CANCER SERUM.—The Toronto Academy of Medicine reports unfavorably on the cancer cure put out by J. Glover of Toronto, Canada. The report of the special committee appointed by the academy may be summed up by the paragraph which reads: "The data which your committee has been able to obtain have not convinced it that the results of treatment obtained by the use of Doctor Glover's Serum are better than those obtained by similar methods introduced by others and which have ultimately disappointed the hopes entertained of them." The committee reported that it was unable to obtain any evidence to substantiate the experimental claims of Doctor Glover, as he had refused to permit members of the committee to visit his laboratory. The committee also reported that it found no evidence for the clinical claims made by Doctor Glover (*Jour. A. M. A.*, Feb. 5, 1921, p. 396).

SALICON.—This is sold by the K. A. Hughes Company, Boston, as "an improved aspirin". In a circular the claim was made, "We rendered aspirin absolutely harmless, and yet retained all its virtues as a medicine," "It positively will not depress the heart nor upset the stomach, no matter how large amounts of it are taken The Massachusetts state medical authorities adopted its use at all the state camps for fighting the Spanish influenza" The first two claims are obviously false. As to the third statement, a letter written to the Commonwealth of Massachusetts brought the reply that the State Department of Health of Massachusetts does not endorse the use of Salicon for any purpose. The A. M. A. Chemical Laboratory examined Salicon and reports that the product is sold in the form of tablets and that each consisted essentially of a mixture of 3.2 grains of acetylsalicylic acid (aspirin), 2.2 grains of magnesium carbonate and some starch (*Jour. A. M. A.*, Feb. 5, 1921, p. 397).

THE WILLIAM F. KOCH CANCER REMEDY.—In 1918 William F. Koch graduated from the Detroit College of Medicine and Surgery. Less than a year after his graduation Doctor Koch declared that he had "developed a real specific cure for cancer". In the *Detroit Medical Journal* for July, 1919, there appeared a brief article by William F. Koch entitled "A New and Successful Treatment and Diagnosis of Cancer". A more extensive article was published in the *New York Medical Journal* of Oct. 10, 1920. As a result of the publicity given the Koch treatment, the Wayne County (Detroit) Medical Society appointed a committee to investigate the matter. The committee reported that Doctor Koch had submitted no proof that his injections had any particular merit and concluded that the study was entirely experimental and improperly supervised. Evidently the most that can be said for this alleged cure for cancer is that the claims made for it have not been supported by independent investigators (*Jour. A. M. A.*, Feb. 12, 1921, p. 466).

METOL DERMATITIS.—Workers in photographic establishments, especially those engaged in the developing process, are exposed to a number of industrial poisons. In an examination of forty studios in Chicago there were found thirty-one cases of poisoning by metol (the trade name for mono-methyl-paramido metacresol sulphate), characterized by an erythematous rash of the hands and arms, occasionally involving other parts of the body and giving rise to ulcers. Various methods for the prevention of this dermatitis and for its treatment are published (*Jour. A. M. A.*, Feb. 19, 1921, p. 540).

IRON ARSENITE.—Ferric arsenite (iron arsenite) rendered water soluble by means of ammonium citrate is known as ferric arsenite soluble. The Council on Pharmacy and Chemistry in 1912 reported that the preparation was irrational and unscientific because "one cannot, in administering this drug, give a useful dose of iron without giving too much arsenic and, vice versa, one cannot give a safe dose of arsenic without giving too little iron" (*Jour. A. M. A.*, Feb. 19, 1921, p. 540).

THE WILLIAM F. KOCH CANCER REMEDY.—A physician writes about a case treated by Doctor Koch and submits a letter written by Doctor Koch a week before the woman died of generalized carcinomatosis. The two letters bring out the optimism engendered in the husband of the poor cancer patient by the widely vaunted treatment of Koch. Herein lies the most pernicious feature connected with the exploitation of alleged cures for cancer, tuberculosis, etc. All of such remedies, whether fraudulent or merely worthless, produce a profound and temporary change in the patient's condition. It is this that tends to warp the judgment, not only of the layman but also of the physician (*Jour. A. M. A.*, Feb. 19, 1921, p. 537).

BOROTETRAMIN ("Boro") not admitted to N. N. R. —Borotetramin and Boro are names applied by the Takamine Laboratories to hexamethylenamin diborate. It is a molecular combination of hexamethylenamin and boric acid which is readily split into its components. The borates of hexamethylenamin have been known for some time, and the triborate has been used in medicine as "Borovertin". Since Borotetramin must split into its components before it can act, it presents no distinct advantage over a simple mixture of hexamethylenamin and boric acid. For this reason the Council on Pharmacy and Chemistry reports that Borotetramin is a superfluous and, therefore, useless article and hence not eligible for inclusion in New and Nonofficial Remedies (*Jour. A. M. A.*, Feb. 19, 1921, p. 538).

MEDICINAL USE OF WHISKY.—In the twenty-four states of the union in which permits for the prescribing of whisky may be issued, there are 112,238 practicing physicians. Of these only 33,379 (29 percent.) have taken out permits. Evidently the remaining 71 percent. do not regard whisky as of enough value in the practice of medicine to go to the trouble of taking out a permit (*Jour. A. M. A.*, Feb. 19, 1921, p. 524).

SODIUM CACODYLATE, ARRHENOL AND MON-ARSONE.—At least three arsenicals not of the arsphenamine type have in recent years been the subject of some exploitation for use in the treatment of syphilis, namely, sodium cacodylate, Arrhenol (the sodium salt of methyl arsenic acid) and Mon-Arsone (the sodium salt of ethyl arsenic acid). As to the first two, it was shown several years ago that neither had any action on trypanosomiasis or spirochete infection. The inefficacy of sodium cacodylate in human syphilis

has been demonstrated clinically. Animal experiments made in the United States Hygienic Laboratory have demonstrated that Mon-Arsone is devoid of any practical trypanocidal action. Whereas the "therapeutic ratio (the ratio of the minimal effective dose to the lethal dose) was 17 and that of neoarsphenamine 28, the therapeutic ratio of Mon-Arsone was found to be about 1, that is, it was effective therapeutically only in approximately fatal doses. The high arsenic content of a compound and a low toxicity and a number of cases of apparent clinical improvement does not indicate that a drug has real value in the treatment of syphilis. Many drugs cause temporary improvement in syphilis, but so far only those arsenicals related to arsphenamine have proved of real value and comparatively safe (*Jour. A. M. A.*, Feb. 26, 1921, p. 595).

MORE MISBRANDED NOSTRUMS.—The following products were the subject of prosecution by the authorities charged with the enforcement of the Food and Drugs Act on the ground that the therapeutic claims made for them were false: Robinson's Alfalfa-Nutrient and Alfalfa Blossom (Alfalfa Chemical Company), the first claimed to be a new scientific discovery which would make thin people plump, the second claimed to be a treatment for women's ailments. Creole Female Tonic, Pa-Nol and Royalin Oil (Parker-Blake Company), the first represented as a cure for female diseases and other conditions, the second represented as a cure for indigestion, dyspepsia, kidney and bladder trouble and other conditions, the third represented as a cure for burns, colic, sore throat, sore eyes, sore mouth, piles, diphtheria and rheumatism. Hill's Specific or Aromatic Elixir (Hill Chemical Company), represented as a specific and cure for diarrhoea of children, summer complaint, etc. Morley's Wonderful Eight (Morley Medicine Company), represented as a cure for colic, sore throat, lung disease, etc. Salvitæ (American Apothecaries Company), represented as a cure for gout, rheumatism, etc. King's O. K. Capsules (Hance Brothers and White), recommended for gonorrhea, weakness, diseases of the bladder or kidneys, etc. Ring's Rose Injection (Charles L. Huisking), represented as a cure for gonorrhea, gleet, whites, etc. Prescription 500 Capsules (Grape Capsule Company), represented as a cure for gonorrhea, etc. (*Jour. A. M. A.*, Feb. 26, 1921, p. 606).

BOOK REVIEWS

A TEXT-BOOK OF PATHOLOGY. By William G. MacCallum, M.D., professor of Pathology and Bacteriology Johns Hopkins University. Second edition, thoroughly revised. Octavo volume of 1155 pages with 575 original illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$10 net.

This book is interesting because different from other works on pathology though sufficiently comprehensive and practical to meet the needs of the student. An effort has been made to discuss the general principles of pathology as illustrated by a study of the commoner and more important diseases. The author starts out with the idea that any and all pathological disturbances are the result of some form of injury, or of the immediate or more remote reactions of the body to injury. Therefore, except in the case of tumors, the book is devoted to the various types of injury and their immediate and remote effects. In

other words, the author discusses disease upon the basis of etiology. However, perhaps nothing could be added which would give the student a better idea of the pathology of the commoner and more important diseases, and the arrangement and method of handling of the subjects is commendable. Our experiences in the Great War brought about intensive study of physical and mental results which never had been heard of before, including the effects of great epidemics and all the misery and disease that have followed famine and cold. The events in connection with this study have been noted in this second edition, requiring for the most part a rewriting of the entire work. The book, therefore, may be considered up-to-date and suited not only for the needs of the student but the general practitioner as well. A large number of excellent illustrations, many of which are in colors, add to the value of the work.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE, by James M. Anders, M.D., Ph.D., LL.D., professor of Medicine, Graduate School of Medicine, University of Pennsylvania, Fourteenth Edition, thoroughly revised with the assistance of John H. Musser, Jr., M.D., associate in medicine, University of Pennsylvania. Octavo of 1284 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1920. Cloth \$10 net.

The Great War with its lessons in the causation and treatment of diseased conditions has compelled us to modify many of our old viewpoints, and in consequence many of our medical text-books are not up to date unless revised and rewritten. Anders' Text-Book of the Practice of Medicine always has been a very progressive and up-to-date work and the present, or fourteenth edition, just from press, fully meets our expectations in keeping up its reputation for progressiveness and up-to-date character. All of those diseases which were prevalent during the World War have been described and all newly developed facts concerning them incorporated in the new text. Among these are typhus fever, yellow fever, cerebrospinal meningitis, pneumonia, ictero-hemorrhagic spirochetosis, diabetes mellitus, scurvy, pellagra, pernicious anemia, exophthalmic goitre, focal infection, tuberculosis, mumps, measles, hemolytic jaundice, hemolytic anemia of pregnancy and the puerperium, and Banti's disease, as well as asthma and hay-fever, by incorporating the further studies of these disorders in their relations to foreign protein.

In the section on diseases of the heart certain diagnostic criteria for determining the presence or absence of true valvular disease have been presented. The various types of heart block, as determined by the electrocardiograph, are discussed from the clinical standpoint. Among sections which have been entirely rewritten is that of influenza, and the studies and experience of the recent pandemic have been incorporated. Again, the relation of varicella to herpes and the vaccination treatment of the former have been noted.

Among complaints not hitherto described in this work are the following: Bronchial spirochetosis, streptococic (hemolytic) pneumonia, trench nephritis, disordered action of the heart, chronic (syphilitic) aortitis, interstitial emphysema, epidemic encephalitis, oxycephaly, wood (methyl) alcohol poisoning, and hotulism.

In this, as in previous issues of the work, diagnosis, including differential diagnosis and treatment, have been especially stressed. The fact that a knowledge of the special causes of individual diseases is

of material assistance in their recognition and treatment has been given attentive consideration.

Altogether the work meets the high standard of excellence attained in previous editions, and it is deserving of continued appreciation on the part of the medical profession.

LABORATORY MANUAL OF THE TECHNIC OF BASAL METABOLIC RATE DETERMINATIONS. By Walter M. Boothby, A.M., M.D., and Irene Sandiford, Ph.D., Section on Clinical Metabolism, The Mayo Clinic, Rochester, Minn., and The Mayo Foundation, University of Minnesota. Octavo volume of 117 pages, with 11 Tables and Charts of Explanation. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$5 net.

This book comes at a time when there is a distinct and real need for just such a work. Interest in basal metabolism is becoming more and more general as the significance of this important diagnostic method becomes better known and appreciated.

The special value of this book is that it describes in detail the technic of measuring the basal metabolism. It tells what precautions and safeguards to observe in making these determinations. All these practical points the clinician must know. The splendid illustrations given quite liberally throughout the book are of appreciable help in enabling the reader to grasp more vividly the ideas conveyed in the text.

The one great drawback to this work is that the authors describe only the gas analysis method, which is apparently the only method used in their clinic. There is no description of the technic with the portable type of respiration apparatus devised by Benedict for measuring the basal metabolic rate, an apparatus which has become quite popular and is being used in quite a number of well-known clinics.

However, in this book the general technic of making basal metabolism observations is given so tersely, so clearly, and so completely, that it should be in great demand among those interested in these studies, no matter with what type of apparatus these studies are being made.

HENRY MILLS HURD, The First Superintendent of the Johns Hopkins Hospital. By Thomas Stephen Cullen. Cloth, \$1.50. The Johns Hopkins Press, Baltimore, 1920.

Undoubtedly Dr. Henry M. Hurd was one of the

outstanding figures in American medicine. As the first superintendent of the great Johns Hopkins Hospital he helped very materially with his unusual constructive ability to establish and build up this world-famed institution.

This little volume, of about 135 pages, is written by one who became associated with this institution two years after it opened, and who was fortunate enough to have had Dr. Hurd as one of his "very best friends" for at least fifteen years. In this book Dr. Cullen points out in his exquisitely interesting and fascinating manner the conspicuous role that Dr. Hurd played in the development of the Johns Hopkins Hospital, and tells of the tremendous influence the latter exerted in his teachings, his writings, and upon all those who came into personal contact with Dr. Hurd.

To anyone at all interested in the life and work of such a prominent medical figure this book will, indeed, be a little treasure.

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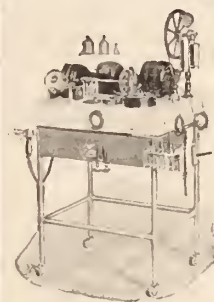
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NUMBER 4

ORIGINAL ARTICLES

STUDENT HEALTH AT INDIANA UNIVERSITY*

J. E. P. HOLLAND
INDIANA UNIVERSITY
BLOOMINGTON, INDIANA

By action of the Board of Trustees of Indiana University there was established in the fall of 1914 a Department of the University Physician. This was prompted by the realization that the University was not meeting its full responsibilities to the citizens of the state in that the general health of its students was given but minor concern.

The student body at this time was greatly increasing in size and complexity, thereby making the supervision of its health a matter of great importance. Therefore, the University conceived its duty to be (1) the treatment and care of those who became ill; (2) proper sanitary conditions not only of the University buildings and equipment, but also at the different lodging and eating quarters of the students; (3) instruction of hygiene laws; (4) study of the physical condition of all students; and (5) physical training adjusted to the physical needs of the different students.

To meet these needs the University has (1) a Committee on Student Health; (2) a Department of Hygiene and Sanitation; (3) a University Isolation Hospital; (4) funds for the hospital care of certain students; (5) a University Physician, with ample assistance.

Work of the Committee on Student Health.

This committee has been active for a great number of years, and always has consisted of those members of the university staff who are by their training best fitted for this task. It has had general supervision of the sanitary conditions about the University buildings and the living quarters of the students in the city. A close watch is kept on the condition of the water used by the students. To this end daily analyses are made of the water from the University Water

Works, the City Water Works, the Men's Swimming Pool and the Women's Swimming Pool. During the past seven or eight years this committee has made regular inspections of the various boarding places frequented by students. Careful notice is taken of the lighting, spacing and general adequateness of the eating houses. Inspection is made of the screening during fly seasons, garbage disposal, dining room, kitchen, cellar and refrigerator cleanliness, and the storage of foods. The committee has found in nearly all cases a gratifying disposition on the part of the boarding house keepers to cooperate and to carry out the requirements of the inspectors. On the basis of these inspections an approved and unapproved list of boarding houses are made out and supplied to the filing office. The approved list is at times published or in some other way made accessible to the student body. The result of this system of inspection has been a very marked improvement in the boarding places accessible to the students.

Courses in Hygiene. Completion of a course of seventeen lectures covering the essentials of hygiene and sanitation is required of all students. This course is under the direct control of one member of the faculty, who organizes and controls the course. The lectures are given by experts in the respective topics discussed. A great deal of care has been taken in the organization of this course to make it most effective, and the students are required not only to attend, but also to pass an examination on the topics covered during the semester.

A new department of hygiene recently has been established at Indiana University, and is supported in part by the federal government. The aim of the federal authorities has been to establish one such department in every state in the Union, and these departments must be in colleges and universities which maintain training schools for teachers. The federal fund is administered by the United States Interdepartmental Social Hygiene Board, which has the following membership: Carter Glass, Secretary of the Treasury; Newton D. Baker, Secretary of War; Josephus Daniels, Secretary of the Navy; Lieut. Col. W. F. Snow, Medical Corps,

*Presented before the Indiana State Medical Association at the South Bend session, September, 1920.

U. S. A.; Lieut. Commander J. R. Phelps, Medical Corps, U. S. N.; Asst. Surg. Gen. C. C. Pierce, U. S. Public Health Service; T. A. Storey, M.D., Ph.D., Executive Secretary. The Administrative Board makes certain requirements of the institutions, among which are the following: All students who expect to teach are required to take fifteen hours of work in the department. Six hours of this work must be done in the division of informational hygiene, which includes general, individual, group and intergroup hygiene. The remaining portion of the required work shall be on the principles of physical training and applied physical training. The government requires that the institution maintain a department for medical examination, that there shall be one medical examiner for men, and one medical examiner for women. These examiners must be selected with special care because of the presence of extraordinary opportunities to exercise a powerful influence upon the mental, moral and physical health of the students with whom such examiners come in contact.

Isolation Hospital. One of the things for which the committee continually has to be on the lookout is contagious disease. This is especially true after the students have returned from their vacations in the various parts of the state. All sorts of infections are likely to be gathered up by the students and carried to the University, and when there developed the University and community of course get the credit for unsanitary conditions. For the proper care of infectious and contagious diseases the University owns and maintains an isolation hospital where students are taken if they cannot be safely and comfortably isolated in their homes or lodging houses. This hospital is a large, comfortable house, beautifully located in a plot of four acres in the suburbs of Bloomington. The rooms and all suspected places are disinfected, and every precaution is taken by the committee to safeguard the rest of the student body.

Fund for the Sick. For certain special cases the University has available a fund to meet the expenses of the students during sickness or accident. In general, this fund is available only for cases of accidents for which the University feels itself in a measure responsible, or where the financial condition of the student is such that he cannot be taken care of in any other way. This sick fund is derived chiefly from the profits of the University Book Store which the University maintains for furnishing students with books and supplies at a nominal cost.

The University Physician. The University Physician's duties include: (1) The physical examination of all entering students; (2) the physical examination of all other students who

take gymnasium or other athletic work; (3) the prescription of corrective gymnastics; and (4) the giving of medical advice, free, to such students as may wish to consult him. The University Physicians do not, however, take charge of serious cases of illness.

Examination of Freshmen and Sophomore Students. A complete physical examination is given every student on his first or second entrance to the University. This comprises heart, lungs, eyes, ears, nose, throat, teeth, skin, abdomen, posture, spine and extremities. After this examination a student is placed in one of four groups: Group I, those of normal health and build; Group II, those of flat chests but otherwise normal; Group III, those of flat chests, poor posture, curvature of the spine, demanding organized corrective gymnastics; Group IV, those who have heart disease, deformities or other organic conditions preventing them from taking any form of gymnastic exercise.

Examination of Other Students Taking Gymnastics or Athletic Exercises. Students other than freshmen and sophomores who undertake gymnasium or athletic work must each year submit to an examination showing their fitness for such work.

Prescription of Corrective Gymnastics. Any student who has unusual physical conditions requiring special corrective gymnastics is examined jointly by the University Physician and the Director of the Gymnasium. Many cases present conditions which require individual training, which is personally looked after by the Director of the Gymnasium.

The Department of Physical Education for men devotes a major portion of its time to the upbuilding and corrective work necessary in those students who are by various disabilities not fitted for military training, and in the past many marvelous results have taken place by the individual oversight of the Director of the Gymnasium. By the combined efforts of the Department of Physical Education and Military Training every freshman and sophomore man student is given a training that has for one of its objects the betterment of the physical body as well as training for a military career. The Department of Physical Education for women likewise requires of every freshman and sophomore woman student a two years' course in physical education. This consists of didactic, indoor and outdoor sports, hiking, hockey, floor, ladder and ring work, basketball, etc.

I am thoroughly of the opinion that no form of exercise, whether in the gymnasium or the privacy of the home, that is suggested as a means of overcoming some defect, be what it may, is of any worth whatever unless a large element of play and fun or competition is present in large degree.

Compulsory military training was established at Indiana University just prior to our entrance in the World War. This training not only fitted our young men for army service, most of whom became officers, but exerted a very potent influence on the health of those participating. Many postural defects were eradicated. The setting up exercises and mass plays, not forgetting the drill itself, worked wonders in developing a perfect physical make-up, so evident to all that those persons in the University who were against compulsory military training are now among its most ardent supporters.

When the Department of the University Physician was first established the University Physician was without assistance with the exception of student help to keep the records. The work gradually grew to such proportions that it was impossible for one to render the service demanded, so that an assistant University Physician was appointed in 1917. The University being a co-educational institution it was deemed wise and best to appoint as an assistant University Physician a woman physician, one in whom the women students might with perfect frankness detail the various disorders of sex. In the selection of this assistance the matter of a bacteriologist also was given consideration in order that sputum and other infectious secretions, urine, etc., might be analyzed and proper care be established, where the daily examination of the city water supply, the University water supply and the water from the different swimming pools may be made in order to maintain a proper safeguard about our students.

The daily examination of the various water supplies has proven to be a valuable means of preventing the various enteric disturbances due to polluted water, as the City Water Works court this daily analysis and thereby keep the filtration and purification plant in proper working order. We have a daily check on the condition of our purification plants, viz., University water supply and swimming pools, and thereby keep them in a practically sterile condition.

I may be asked what number or percentage of our student body is suffering with any of the specific diseases. We are indeed fortunate in that but four or five cases a year is about all we come in contact with, whereas in former years 10 percent or more of the men students were so affected. This reduction has come about in a small way by education, but the real cause of its lowering is prohibition. Prohibition from the standpoint of higher education and health is the greatest single factor put forth in the history of this great country.

A summary of the work done in the office of the University Physician during the year 1919-1920 is as follows:

Out of a total enrollment of 3701 students, of which 2656 were men and 1045 were women, the treatment and examinations were:

	Men	Women
Eye, Ear, Nose and Throat....	797	963
Furuncles	229	124
Skin	216	314
Accidents	214	316
Lungs	121	152
Influenza	109	25
Abdominal	69	118
Vaccinations	66	69
Nervous	54	155
Gastric	35	16
Feet	23	30
Exanthemata	19	1
Hepatic	16	0
Cardiac	7	5
Renal	3	2
Gynecological .....	..	93
Miscellaneous .....	..	133
Physical examinations.....	1457	725
	<hr/>	<hr/>
	3433	3241
Grand total.....		6674

A careful investigation of conditions at other leading American universities shows that Indiana University has not been lax in meeting this most important phase of its work, and places her in the front rank both in respect to the activity of the University authorities and in the actual health conditions of the student body.

In closing I wish to emphasize the cordial relationship existing between the physicians of Bloomington and the University Physicians, for without this cooperation I believe the department would not have had the success obtained.

THE BENEFITS OF COMPULSORY MILITARY TRAINING*

C. E. REED
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Compulsory military training as a national policy has been accepted by many European peoples for generations, and following our American War for Independence, and the War of 1812, our own government adopted such a policy, as evidenced in the Annual Muster or Training Day, on which all men between the ages of 18 and 45 were required to foregather, with such arms as they possessed. The training was for one day only, and obviously inadequate—and organization there was none, as we understand the term today, but the exercise or requirement served its real purpose of giving to the men of the times a sense of their obligation to bear arms for the defense of the state or

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nation. Aside, however, from the value of military training for military purposes, the system has distinct value in the development of young men into the best type of citizens.

To secure the best results from the "three Rs" it was found desirable and practicable to make school attendance compulsory. So to obtain the best results from military training that, too, should be made compulsory and accepted as a part of our educational system. The results will not be merely physical. There will be also mental and moral advantages.

Looking at the question from our standpoint as physicians, the first consideration naturally will be the physical gain. Time was when the profession as well as the laity thought of the doctor as a dispenser of pills and potions—a healer of diseases, and under that conception of his duties he attained distinction and honors second to none of the learned men of his time. In the past half-century ideas have changed and laity and profession have come to feel that a physician's larger service is in the prevention of disease. And the laurel wreath goes to those who by research and painstaking experiment discover the cause of disease and the means of its prevention. Twenty-five years ago the term preventive medicine was new. Today it is on every tongue, and every medical school of standing has its chair of Preventive Medical Science. We have made great progress, but those who have had part in the physical examinations of the millions of young men for our great army in the World War were shocked to find 26 percent of those between the ages of 21 and 31 physically disqualified for service, and an additional 6 percent who were accepted for limited service only. Nearly one-third of our young manhood physically crippled! And of the two-thirds who were accepted a large percentage were far from being the perfect physical specimens we picture to ourselves when we speak of "our sturdy young Americans". Some of these men, to be sure, were upstanding, square-shouldered, clear-skinned, keen-eyed fellows whom any of us would be proud to call our sons. But all too many were round-shouldered, flat-chested, sallow-skinned, dull-eyed men, under-weight or overfed, lacking punch, ambition, fire. And such men we gave to the training camps to be molded into an army which should typify America.

Some of us were privileged to watch these men in training and to note the rapid transformation which took place under the drill and regular life. The first change was in carriage, resulting from the so-called setting up drills, given largely to develop co-ordination and co-operation, but resulting in better posture for the individual, fuller chest expansion, deeper breathing, and improved circulation. It goes without

saying that these changes were followed by improved metabolism and better elimination. Regular habits of eating, regular hours of sleep, the lack of opportunity for dissipation, all contributed to the transformation. These factors combined with the various drills and exercises, covering several hours daily, eventually gave us an army of men physically second to none of the allied group.

Bringing together large numbers of men from different localities and different walks of life into the close contact, under camp conditions, is always attended with some risk. When this grouping is done with deliberation and proper preparation, the danger is greatly reduced. We cannot forget our disastrous experience with influenza two years ago, but that, in all fairness, must be attributed more to our unpreparedness and lack of organization than to those things which are inherent in the military regime. After the military machine was organized so that it began to function in a normal fashion, the regular medical inspections and constant supervision of sanitary conditions made the general health of the men concerned better than it had been on the average in home environment.

Right here I wish to note that the enforced observing of sanitary and hygienic regulations undoubtedly "gets into the blood", and carried back into civil life reacts favorably on community life. Daily "policing" of the camp, *i. e.*, the cleaning up about the buildings and grounds, the care of latrines and public places, and the consequent safety of the organization, breeds a habit of mind which never again will permit the men to complacently contemplate the untidy streets of the small town or village, the unsightly dumping grounds, or the malodorous open vault privy. The constant caution in the matter of safe drinking water, and the protection of food supplies, will be valuable contributions to that warfare which is rapidly making typhoid and dysentery diseases of the past.

Since beginning this paper I have had an experience which, to my mind, gives weight to my contention for the value of enforced military training and discipline. Together with the superintendent of the institution with which I am connected I was asked to take charge of a group of 350 Boy Scouts and their leaders in a two months' tour of England, France and Belgium. The superintendent had charge of organization and discipline. I had the health and sanitary problems. The lads were between 12 and 18 years of age, from 32 states and 103 towns. We had two days in which to effect some sort of organization before embarkation. We spent two weeks on board ship, under troop conditions, three weeks in a camp of 5,000 boys in London, and two weeks in the cities and on the

battle fields of France and Belgium, always under high tension and frequently under camping conditions far from ideal. But by methods which obtain in a well-ordered military camp we succeeded in carrying this heterogeneous, highly susceptible group through the two months' experience with the development of only one case of chickenpox, one case of measles and three cases of scarlet fever. The group as a whole returned to New York in better flesh and better color than we received them at the place of mobilization. Colonel Siler, of the U. S. Medical Corps, who traveled with us on the return voyage, said this accomplishment was, in his opinion, one of the most remarkable that had come under his observation. Without organization, system and discipline of the kind I have described these results would have been impossible.

The experiences of men in a modern military camp will react favorably on the medical and surgical service in civil life. It is unfortunately true that in the recent war some of the dispensary and field hospital work was far from ideal, but in the main the men selected and the work done were of the very highest order. Such conditions obtaining in the camps devoted to the training of young men through a prescribed period each year for one, two or three years, will inevitably give them a better conception of what medical treatment could and should be, and returning to their homes, especially in the small towns and country districts, these men will demand of the local physicians better and more up-to-date methods than frequently prevail. Men graduating from the present day medical schools have been well trained, but lacking the spur of public demand many good men grow careless, fall into slipshod, unscientific ways and fail to do justice to their patients, themselves, or our honored profession.

Each day the profession is realizing more fully the close relation between the attitude of mind and physiological processes. The man who fails to take into account the psychological facts in the history of a given case may miss the most essential point. Physical poise tends to mental alertness. Improved co-ordination of physical movements increases accuracy and promptness in mental activity. For years we have been working to this end in the gymnasiums and manual training activities of schools and colleges, and the military training carries the work a step further. The responsibilities imposed and the opportunities for leadership offered develop initiative which carried back into the ordinary business gives the man a new prestige in his original surroundings. To be sure "you cannot make a silken purse out of a sow's ear", but a sluggish mind may be aroused,

a lazy mind quickened, and dormant unrecognized faculties awakened. In two comparatively recent emergency situations which came under my observation the quick and accurate response of the alert disciplined men who had had military training resulted in the saving of life, where the slower disorganized efforts of strong, willing, but undisciplined men had failed.

American youth needs, more than almost anything else, respect for constituted authority. Much objection has been made to military life on the ground that the will of the soldier is constantly subject to the will of the officer, a condition out of harmony with the idea that the American is a free man and subject to no one. Yet in civil life we daily submit to one man's dictation for the good of the majority. For example the traffic policeman holds up his hand—we stop. He waves his hand—we proceed. We submit to his authority not because we admire the policeman, not because of his superior wisdom, but because for the time being he represents the commonwealth and is administering those regulations that safeguard and facilitate traffic. The will and the safety of the majority is supreme. This idea is fostered by military training.

Objection has been made to military discipline on the score that when military control ceases there is less regard than usual for civil authority. In individual cases that doubtless has been true, but my own observation has been that such instances are rare and have been given undue prominence in press accounts. This opinion is supported by the answers to a recent questionnaire addressed to a large number of competent observers. In fact the evidence seems to indicate that those who have been under military discipline, thoroughly and wisely administered, are less tolerant of indifferent enforcement of civil regulations than are average citizens.

We Americans are essentially individualistic in our habits of thinking. Altruistic also—the two are not incompatible. Without group activities and group interests this individualism tends to selfishness. Compulsory military training offers one very effective means for providing needed group activity. Close contact with other men of varying gifts, from widely divergent walks of life, gives a better standard of self valuation, a truer self-respect, and a larger regard for the worth and rights of one's fellows. The true democratic spirit is engendered, and the welfare of the community, the state, the nation, becomes the dominant interest of men so trained.

Fear has been expressed that the mingling of the youth of so many different strata of society,

with widely differing standards of personal morality, will lower our national standards of morality, but I believe strongly that the converse is true. The group for whom compulsory training is suggested is made up of your sons and mine. If they are tending to moral degeneration, the sooner they are brought out into the open where unprejudiced leaders shall observe the fact and apply some remedy, the better. Most men who are in touch with lads of high school and early college age will agree that we have nothing to fear. The right thinking majority will dominate. Isolated instances of failure in this phase of our recent military experience do not invalidate the claims made for the system. We must remember that the conditions were abnormal. Much was done under extreme pressure. Mistakes were undoubtedly made, but they were not inherent defects. Many of those which occurred in the early months were later satisfactorily corrected.

Compulsory military training will not bring the millennium. It is not a panacea for all the ills of our civic life, but I believe that wisely administered it may become a valuable adjunct to our present educational system in developing all-round, vigorous, right thinking, responsible citizens.

MALNUTRITION OF SCHOOL CHILDREN*

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(NOTE:—The following outline and charts are used in presenting the question of malnutrition to pupils above the third grade. It holds their attention, and interests them, and is presented with a view of aiding those called upon to speak to children upon the subject. The outline and charts are of sufficient size that they may be seen by all present.

If the pupils know their weight and how much underweight they are it is more effective.

Charts 4 and 5 were two class papers selected from a domestic science class. The pupils were estimating the amount of energy consumed in the foods eaten the day preceding. Case 4 illustrates overeating and bad selection, also the absence of food value in tea and coffee. Case 5 illustrates underfeeding and excessive exercise.)

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MALNUTRITION

1. Def.—
 - (1) Signs and Symptoms.
2. Cause—
 - (1) Heredity.
 - (2) Diet.
 - (a) Insufficient food.
 - (b) Unsuitable food.
 - (c) Faulty habits of eating.
 - (3) Fatigue.
 - (4) Defects and disease.
 - (Teeth, Tonsils, Adenoids and Tuberculosis).
 - (5) Poverty.
 - (6) Ignorance.
 - (7) Lack of parental care.
3. Effects:
 - (1) Physical.
 - (2) Mental.
 - (3) Moral.
4. Treatment:
 - (1) Find cause—
 - (a) Physical Examination.
 - (b) Mental Examination.
 - (c) Social Examination.
 - (d) Scholastic Examination.
 - (2) Make case plan—
 - (a) Refer medical cases.
 - (b) Place mental cases.
 - (c) Refer social cases.
 - (3) Education:
 - (a) Methods:
 - (aa) Spread information.
 - (bb) Inculcate good ideas and good habits.
 - (cc) Break bad habits.
 - (b) Agencies:
 - (aa) Regular course of study
 - (bb) Special.
 - Auditorium.
 - Lunch rooms.
 - Fresh air rooms.
 - Rest rooms.
 - Modify pupils' program
 - Nutritional clinic and classes.
 - (c) Object:
 - Prevention.
 - Cure.

IMPORTANT TEACHING POINTS

Foods and Eating:

- Pure food.
- Plain food.
- Proper amount of food.
- Regular meals.
- Chew food well.
- Pure water—proper amount.
- Coffee and tea not food.
- Pleasant eating surroundings.

Personal Hygiene:

- Care of the teeth.
- Wash hands before meals.
- Care of the body.
- Proper clothing.
- Pure air in sleeping rooms—10 hours at night for underweight.
- Rest to meet needs.
- Exercise to meet needs.

CHART No. 1.
ENERGY REQUIREMENT
AVERAGE WOMAN

Kind of Activity:	Calories per Pound per Hour:
Sleeping	1/2
Sitting, reading, writing, etc.....	3/5
Standing	3/4
Light exercise, dish-washing, cooking for 3-4.....	1
Moderate exercise, cooking for 6-12, hand scrubbing, etc.....	1 1/4-1 1/2
Active exercise, heavy work.....	1 3/4-2

(ROSE—Feeding the Family).

ENERGY REQUIREMENTS			
Age Years	Protein per pound	Calories per pound	Total Calories average
5		35 to 37	1400 to 1700
6		34 to 35	1400 to 1700
7		32 to 34	1400 to 1700
8-9	3 to 4	30 to 35	1700 to 2000
10-12	3 to 4	28 to 32	1900 to 2100
12-13	3	25 to 30	1900 to 2200
14-17	3	20 to 25 girls	2200 to 2600
14-17	3	20 to 25 boys	2500 to 3000

(ROSE—Feeding the Family.)

CHART No. 2.

(Gains since November, 1919, to
February, 1920)

SCHOOL No. 1.

- 2 pupils gained 8 pounds.
- 4 pupils gained 6 pounds.
- 5 pupils gained 5 pounds.
- 13 pupils gained 4 pounds.
- 10 pupils gained 3 pounds.
- 11 pupils gained 2 pounds.
- 5 pupils gained 1 pound.
- 5 pupils gained less than 1 pound or lost.
- 12 pupils absent.
- 15 pupils not doing well in December.

Total enrollment—202.

40 gained 126 pounds, from June to November (5 months). The same pupils gained 122 pounds, from November, 1919, to February, 1920 (3 months).

SCHOOL No. 2.

- 1 pupil gained 13 pounds.
- 3 pupils gained 8 pounds.
- 3 pupils gained 7 pounds.
- 12 pupils gained 6 pounds.
- 11 pupils gained 5 pounds.
- 12 pupils gained 4 pounds.
- 7 pupils gained 3 pounds.
- 4 pupils gained 2 pounds.
- 1 pupil gained 1 pound.
- 7 pupils gained less than 1 pound or no gain.
- 4 pupils absent.

65 Total.

CHART No. 3.

PERCENT OF PUPILS UNDERWEIGHT
BY SCHOOLS

School	10% Under	7-10% Under	10% Under	7-10% Under
Emerson	13.8 Mch. 1919	8 Mch. 1919	14 Feb. 1920	11 Feb. 1920
Jefferson	14 May 1919	2 May 1919	15 Mch. 1920	12 Mch. 1920
Beveridge	9 Nov. 1919	9 Nov. 1919		
39th St.....	10 Nov. 1919	7 Nov. 1919		
25th Ave.....	10 Feb. 1920	9 Feb. 1920		
Horace Mann..	11 Feb. 1920	10 Feb. 1920		
Miller	31 Nov. 1920	5 Nov. 1920		
Emerson H. S.	17 Feb. 1920	8 Feb. 1920		
Clarke	12 June 1920	10 June 1920		
Ambridge	18 June 1920	6 June 1920		
15th St.....	11 June 1920	12 June 1920		
21st St.....	8 Mch. 1920	9 Mch. 1920		
West Gary....	15 June 1920	15 June 1920		

CHART No. 4.

CASE No. 1—G. P. Girl, 12 years. Height 59 in. Weight 121. Food requirements 2400 calories. Normal weight 91.

BREAKFAST

Calories		Calories	
1 egg	80	2 t. sugar.....	50
4 slices bread...	400	Milk	165
2 t. butter.....	200		
2 t. apple butter.	100	Total	995
1 cup coffee.....	0		

DINNER

3 balls hamb'ger	150	Apple butter.....	50
Milk	165	2 t. butter.....	200
5 slices bread...	500	2 t. sugar.....	100
Potatoes	200		
1 cup tea.....	0	Total	1415
Gravy	50		

SUPPER

2 cups cocoa.....	200	1 cup jello.....	400
Milk	165	4 slices bread....	400
Sugar	50		
2 t. butter.....	200	Total	1415
Total Calories			3825
Food Need.....			2400

Excess Carbohydrates.....1425

CHART No. 5.

CASE No. 2—G. P. Girl, 12 years. Height 55 in. Weight 64. Energy Requirements 2025 Calories. Normal weight 75.

BREAKFAST

	Calories
1 slice home made bread.....	100
Butter	100
Prunes	100
Total	300

DINNER

4 biscuits.....	200
Butter	200
Honey	100
Total	500

SUPPER

Beef steak.....	100
3 potatoes.....	300
2 biscuits.....	100
Gravy	50
Graham crackers.....	100
1 large orange.....	100
Total	750

Helpful material from following sources is hereby acknowledged:

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ROSE MARY SWARTZ, "*Feeding the Family.*" The MacMillan Company.

KINGSLEY, SHERMAN C., "*Open Air Crusaders.*"

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CLINICAL BLOOD CHEMISTRY TESTS*

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From the Clinic of the Robert W. Long Hospital

Analysis of blood from a chemical standpoint marks a comparatively recent advance in clinical medicine. At first this was done in a more or less cumbersome and crude way, but now with comparative ease and accuracy. It was hoped—and this hope has been in a way fulfilled—that analysis of the blood would give more definite and more accurate information about a given case than the excretions which had been relied upon before. For instance, in nephritis, it has been observed clinically, and has been abundantly proved experimentally, that urinalysis does not give very accurate information. In fact after much experimental observation McNider came to the conclusion that the quantity of albumin was no index whatever to the severity of the lesion. Some years ago during the discussion of a paper, Dock quoted from Thomas Fuller's article on "The Good Physician", thus: "The good physician trusteth not the single witness of the water if better testimony may be had, for reasons drawn from the urine alone are as brittle as the urinal. Sometimes the water runneth in such post haste through the sick man's body it can give no account of anything memorable in the passage, though the most judicious eye examine it." While the statement may be a trifle overdrawn, we cannot help but admit the truth of the statement in the main. Urinalysis may and often does give an idea as to the present destructive process going on in the kidney, but often gives no idea as to the amount of damage which has been done. Clinicians have been expecting for some time that there would be a test developed which would give the information desired. It is not a one test upon which we should depend but a correlation of the best tests with the clinical picture.

The objections to the tests as they were formerly done were:

First. That they required a large amount of blood, so much so sometimes as to render the test impracticable.

Second. That methods at first were crude and often inaccurate.

Third. That a large amount of time, energy and apparatus were necessary for the determination. These objections practically excluded the blood chemistry from daily use.

These methods now have been so much simplified that they are practically all micro-chemical determinations—very largely through the

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work of Marshall, Folin, Benedict and Van Slyke. While it is not necessary or practical that the clinician himself do the test, yet it is highly desirable that he know something of the technique so that he may know something of the shortcomings of each analysis, and the abundant opportunity for inaccuracy. Standard solutions need to be checked and rechecked in order to have accurate work. A feeble attempt has been made to demonstrate the technique of a few of the blood chemical determinations. A few charts have been arranged with curves to show the course of some cases chemically, along with some other data. It is by an assemblage of all the data that a more accurate diagnosis and prognosis can be made and the treatment of the case managed more intelligently.

One of the simpler tests and one which has found wide and valuable use, especially in the treatment of diabetes, is blood sugar. Well-regulated clinics now depend quite as much upon the blood sugar as upon urinalysis, and in fact in some cases more. In treating a case of diabetes it is often found that the urine may become sugar free, and so remain, and yet there may be present a very marked hyperglycemia. Its value is illustrated by CASE No. 8733—a case of severe diabetes who at the time of having a urine sugar of 0.3 percent, or 3.6 grams in 24 hours, showed a blood sugar content of .27 percent. Twelve days later blood sugar was .23 percent, yet urine had been sugar-free seven days and carbohydrate intake was 29 grams. Certainly more concern would be exercised over such a case than one in which the reading was .12 percent under similar circumstances. While blood sugar is very important in the progress of a case of diabetes, fear of impending coma is always in the mind of one managing the case. This has been anticipated largely through examination of the urine for the acid bodies. Now some comparatively simple analyses are made of the plasma itself relative to alkaline reserve, as for instance—according to Van Slyke. Another is to observe alveolar CO_2 tension as measured by the Haldane method. In the above mentioned case coma was threatened clinically, yet alveolar CO_2 determination was 5.9 percent, or normal. P^{H} of blood at the same time was 7.55, or normal. The future progress of the case was very satisfactory for about 3 or 4 months, at which time he died in coma.

Recently some investigation has been done in cases of hyperthyroidosis as to blood sugar content before and after a meal of glucose. Briefly stated the method is as follows: The blood sample is taken for analysis while the patient is fasting, *i. e.*, before breakfast. Then a meal of 100 grams of glucose is given. Blood sugar is then followed over a period of 5 to 6 hours.

Of course blood sugar curve rises very rapidly. Where the curve remains high over a period of 4 hours some significance is attached to the test. This in connection with the Goetch test, basal metabolism and the clinical picture, often gives us very desirable information. Accompanying are a few charts combining these tests. In some there is complete harmony—in others they are not all positive.

CASES

In CASE No. 9782, for instance—in the Goetch test the blood pressure rose from 110 to 128 systolic, a positive test. Pulse rate and systemic effect also indicated a positive test. On giving 100 grams glucose per os, blood sugar rose from .16 percent to .21 percent in one hour, though this hour's specimen of urine was negative for sugar. At second hour blood sugar was .17 percent; at four hours the same, with an accompanying glycosuria. At the end of six hours the reading was .15 percent. While the curve did not stay typically high, it is seen that the blood sugar with patient fasting was abnormally high—another indication of hyperthyroidism. Clinically, the patient had a cystoma of the thyroid with an indication of mild hyperthyroidism.

CASE No. 9811. Goetch test negative except for a slight sensation of tremor. Blood sugar mounted from .12 percent to .22 percent in four hours, though all urine specimens were negative for sugar. Clinical signs just sufficient to suspect hyperthyroidism.

CASE No. 9998. Goetch test negative. All clinical signs very positive of hyperthyroidism. Basal metabolism 48.4 calories per kilogram for 24 hours. Blood sugar .17 percent on fasting. In 2 hours after glucose .18 percent, and 4 hours .13 percent. No glycosuria. Goetch test and glucose test both not very strongly positive yet other findings very definitely positive.

CASE No. 10155. Goetch test positive. Basal metabolism 45.7 calories per sq. M. per hour. Blood sugar showed increase of .12 percent to .18 percent at the end of 5 hours. No glycosuria.

Here the value of many tests is at once realized.

Perhaps blood chemistry has found its widest application in the cardio-vascular renal group and urologic cases. How often is it found extremely difficult to determine whether the heart, blood vessels, or the kidneys are chiefly at fault and how severe is the lesion. As evidence of this groping about one has but to turn to the long list of various functional tests, in most cases as measure of the kidney work. Many of these had their day, only to fall into disuse or disrepute in a few years and other tests substituted for them. Rowntree & Geraghty in 1912

gave us the phenolsulphonephthalein renal functional test, which is regarded by clinicians as perhaps the best single test.

There is a smaller group of cases in which the individual is in a semi-comatose or stuporous state, in which blood analysis is of paramount importance in diagnosis, *e. g.*—

CASE No. 9971. A man 55 years of age, who experienced fainting attacks, unconscious attacks and general weakness. B. P. systolic 170, diastolic 110. Lips definitely cyanotic. No hyposthenuria, but fixation sp. gr. Phenolsulphonephthalein, 43 percent in two hours. Arteries tortuous. Creatinin content 4.16 mg. per 100 c. c. Blood urea 40.5. Ambard's coef. 0.148. McClean's index 29.2 percent.

Clinical picture with blood findings left no doubt but that the man was suffering from a latent uræmia. In this case blood chemistry played an important part in the diagnosis. Under treatment the case became symptomatically much better. Four weeks later the blood creatinin was 2.92 mg. Blood urea 23.4. Ambard's coef. 0.93. McClean's Index 73.9. In this case blood findings and clinical picture are exactly parallel.

In some of the urological clinics much importance is attached to the blood findings as an index to the operative risk of an individual. Of the nitrogenous products in the blood, uric acid is the first to be retained where renal damage has been done; urea second, and creatinin third, blood creatinin being the last of these bodies to be retained. A retention of such indicates considerable damage to the kidneys. Creatinin content of the blood is very easily determined and affords a very great asset in making a prognosis. It affords also much assistance in making a more accurate diagnosis as to the severity of renal lesion. Anything below 2 mgs. per 100 c. c. blood may be considered not pathologically increased; from 2 to 3 mgs. arouses our suspicions, and 3 to 5 mgs. indicates a grave prognosis. A reading of 5 or over indicates early termination of the case in death. In CASE No. 8865 of our series, the young man did not appear very sick. He was, however, on close examination, in much worse condition than appeared. He was somewhat anemic, had slight edema of the ankles, had marked retinal hemorrhages, and edema of the nerve head. Urine showed fixation of specific gravity; albumin 2 gms. per L. and a few casts. Phthalein output in two hours was zero. Blood creatinin found to be 14.8 mgs. Patient died in 10 days without coma. On the other hand—CASE No. 7992—age 59, showed the same urinary finding, with phenolsulphonephthalein of 28 percent in 2 hours and a blood creatinin of 3.6 mgs. Patient recovered and went home and returned next

year with practically the same findings; again left hospital, and is now living in comparative comfort. As a rule, in our cases in which blood creatinin has been over 3.5, the case has terminated rather early in death. It has been shown by Myers that the creatinin content of spinal fluid runs parallel with that of blood.

The urea content of blood, as a rule, increases before the creatinin content, but variations from this are very greatly produced by diet. In experimental nephritis it has been found that urea is retained to a more marked extent in the glomerular or vascular type than in the tubular. Myers considers the chief value of blood urea to be in determining the course of treatment and progress of the case under treatment. For instance—in CASE No. 9559—the blood urea rises on increasing the protein of the diet and promptly falls upon its restriction. Clinically the case was continually growing worse. Creatinin increased from 3.2 to 3.9 in 7 days. Urea fell to 30 mgs. from 35. A week before death urea arose to 145 and creatinin to 4.1.

Urea content seems to show a quicker variation, while creatinin content is more constant. This is more fully exemplified in CASE No. 9745—a case of severe nephritis whose blood creatinin on June 15th was 3.09 and urea 53.4—showed on dietary and other treatment on June 21st, a blood creatinin of 4.17 and a blood urea of 49.5 with marked diminution in edema. On increasing protein in the diet, urea mounted to 65.4 in four days' time. The diet was restricted and the urea has been within normal limits since. Creatinin has also declined somewhat, though still distinctly above normal.

A few charts have been prepared following the creatinin and urea curves. A blood urea under 40 mgs. may be taken as normal. When it rises above this, one begins to suspect retention. Folin and Denis found that in cases of intestinal obstruction and in profound anemia from hemolysis that there was a marked increase in the blood urea. This very promptly fell in the cases which recovered. Myers in watching a series of cases found that a blood urea nitrogen of 20 mgs. made an operative procedure accompanied with more risk than one lower, and a reading of 25 mgs. was definite contra-indication unless there was emergency.

By a combination of blood urea and the rate of excretion of urea in the urine with other factors has given a coefficient (Ambard's) for which a great deal of importance has been claimed. It has been criticized from the standpoint of factors which are not accurate and the general mathematics involved in the calculation. However, where this has been followed, it in general follows the course of the other findings.

While our figures are not numerous, yet we have obtained some abnormally high readings where all other findings indicated normal renal function. An example of this follows:

CASE No. 10155—Mild hyperthyroidism in which Ambard's coefficient was run as a matter of routine and not because nephritis was suspected. Gave a reading of 0.161 considerably increased. Blood creatinin in this case 2.27 mgs. Blood urea 15.58. McClean's Index 24.8. Phenolsulphonephthalein 60 percent in 2 hours. The high Ambard's coefficient and low McClean was explained on the basis that patient voided large quantities of very dilute urine. In CASE No. 9971—it is seen that Ambard's coefficient and other chemical readings coincide.

In the analysis of our series it is seen in general that a phthalein output of about 30 percent or below in two hours is accompanied by a definite increase in creatinin content, and in many cases also the urea content. This seemed to be a sort of a general turning point, though phthalein output of 40 percent not infrequently showed some increase. In these cases also there was considerable change in the urinary findings and perceptible increase in blood pressure readings. It has been not infrequently observed that when edema increases, the blood chemistry readings decline, and as the edema disappears, clinical symptoms grow worse and the blood findings increase. These cases of course bear a much more guarded prognosis than those in which symptoms grow better and the blood values still remain low.

SUMMARY:

First. Blood chemistry gives us a valuable aid from the standpoint of diagnosis, prognosis, and management of our cases, especially those with a diabetic or nephritic tendency.

Second. It is not the one test but the correlation of a number which gives the most accurate information of a given condition.

Third. The methods of determination of the simpler substances are now reduced to practically micro-chemical analyses and can easily be carried out in a well kept laboratory in a comparatively short time, and with only a few c. c. of blood.

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DISCUSSION

CAPT. C. P. KNIGHT, U. S. P. H. S. (Jefferson City, Mo.): We have put on in Missouri an educational campaign and have done some educational work by means of nutrition clinics. We have examined over 17,561 children and have found that 59 percent of those children were under weight from 7 to 10 percent. Many of these children would not attend the clinics, but out of that 59 percent 4,076 did attend the clinics. We have instituted what we call the "Mother-Child" clinic. These children write an invitation in their own handwriting to the mother and request her to be present at the school on a certain day on which the clinic is to be held. The clinic is composed of the physician, a nurse, nutrition worker from the University of Missouri and a school worker. The reason we instituted the "Mother-Child" clinics was that by this method one would serve as a check on the other, the child as a check on the mother and the mother on the child. Children are apt to lie; if they are asked if they drink coffee they are likely to say "No, I never touch it", and the mother will say "Now, Johnny, don't lie to the Doctor". And very often, too, when we say to the mother, "Do you give the child milk?", the mother will be ashamed and will say "Yes", and the child frequently will say "Aw, maw, when did I get any milk?" (Laughter.) Right there we have a check in these cases and it is very helpful.

In a period extending four months we found that 71 percent gained two or more pounds over the normal rate of gain every month, 20 percent lost and 9 percent remained stationary. In looking over the ones that remained stationary or lost we found that many had not obeyed instructions and many had been sick with some acute illness or some infectious disease. But 71 percent actually gained because they carried out the instructions given them.

As to the causes of malnutrition, our survey has shown that one of the causes is the lack of water and fat soluble substances in the food, and not so much to the caloric value. We have seen these children increase the amount of diet and not show any improvement, but where they are given the greens, such as spinach and other fresh vegetables and cut out the biscuits and cakes, they have gained in weight. The children who have eaten the fresh vegetables and especially whole wheat foods have improved. I think that unsuitable food is the most important cause, and next comes the ignorance on the part of the parents. Next to that comes lack of sleep, and here the movie is the bad thing. We have found that a large percentage of those under-weight children are movie fiends. They are permitted to go very frequently to the

movies and do not get a proper amount of sleep.

Our clinics are held once a month where the mother and child are seen. The mother returns at the end of the month and tells us whether she did or did not carry out the instructions given.

With regard to physical defects, I am of the opinion—I may be wrong—that physical defects are more symptoms of malnutrition than the actual cause, for the reason that of the total number examined, normals and overweights, 59 percent of these children had decayed teeth, 48 percent had enlarged tonsils and 25 percent the fatigue posture with symptoms of round shoulders, winged scapula and so on. Of the 59 percent of the underweight there were 40 percent with enlarged tonsils, 40 percent were mouth breathers, and 50 percent had posture defects. Therefore, a certain percentage with physical defects were not suffering with malnutrition. I do not mean to minimize the importance of having these defects corrected, but it seems to me that even with these defects the children will gain weight under proper management. The most important thing that we have found is the fatigue posture, winged scapula and the mental retardation of the child. One principal said that the greatest retardation in his schools was among the children that were 7 or more percent under weight.

We have tried to cover the state of Missouri, so you can see the problem we have been up against. We have covered about fourteen counties and have selected a moderate sized town in each of these counties. We have made a survey of only three typically rural districts and have found very little difference in the condition of the child in the rural district and in the town.

One interesting thing Dr. Nesbit spoke of was poverty as an influence in malnutrition. In this survey we have found out that the highest percentage is in the best schools and among the better class of pupils. The negro made the best showing, the "poor white" the next best. This is probably due to the fact that the parents with more money are more indulgent and the children have money for picture shows, for candy and ice cream and sodas, and consequently they lose their appetite for the regular meals and are not forced to eat.

This survey was made last year. This year we are organizing and getting the local communities to realize that the health of the children is their problem. We have approached all of the medical societies and put the problem up to them that they shall devote a certain amount of time to examining the school children and helping to improve their condition. All the

doctors are willing to cooperate and give a certain number of hours each year to this work. The American Red Cross furnishes the nurses in the communities that are unable to pay for them, but many of the school boards have put on their own nurses and pay them from their school funds. The University of Missouri, besides detailing fourteen Home Demonstration Agents for nutrition work, sends out three nutrition specialists to help in this work and supervise the work of the Home Demonstration Agents.

DR. HUGH MILLER (South Bend): Those of you who were on examining boards during the war were, I am sure, surprised and startled and depressed at the number of young men of draft age who were so defective physically, and not a few mentally, as to make them ineligible for service in our army, the army of a young and supposedly vigorous nation. This experience was not confined to any locality, any state or section, it was universal and consequently most serious. It constitutes, without doubt, one of the most serious problems before this country, and I am sure that no one who had the ugly situation forced upon their attention, as did the members of the draft boards, doubts that training, nation wide, instituted and carried on by the federal government is the answer. If one of our patients has a cancer we urge and insist upon its early removal. Then what of this malignant thing eating at the vitals of our country? What are we doing to bring the facts to the attention of the uninformed public and to our legislative bodies? Never, I believe, was the medical profession faced with a more serious duty, and so great and important is it that it calls for the closest cooperation and hence should, I feel, be undertaken by our national organization, The American Medical Association, working with such bodies as the Military Training Camps Association.

Dr. Ritchey has introduced a subject of tremendous importance. It is true, of course, that as long as our knowledge of the physiology of the kidney is as limited as it is our interpretation of kidney function tests must be made with considerable caution, but the tests in question have been in use long enough now to have demonstrated their value, remembering always that they are laboratory procedures to be considered as part of the evidence and always in conjunction with the clinical findings.

We have learned that the quantity of albumen in the urine gives us no clew as to the extent of involvement of the kidneys in a chronic process. Neither can the clinician estimate the pathology in the kidney in chronic nephritis by the clinical findings. So we welcome any test that gives us even an approximate idea of what

work the kidney is capable of. In using these functional tests we should keep in mind the fact that the kidney is more than a simple mechanical filter, and so the fact that one substance is dammed back in the blood to an abnormal degree does not necessarily mean that the kidney threshold is high for all other substances. This being true it is very desirable that several tests be made if we are to get anything like a proper conception of the capabilities of the kidney in question.

DR. MILO MILLER (South Bend): Few of us have the opportunity of studying malnutrition under such circumstances and in such large groups as Dr. Nesbit and Dr. Knight have spoken of. However, there are not many in general practice who do not daily come in contact with the malnourished child. We have the same problems to face, and it is important to know how to recognize these cases and what to do. As has been pointed out, it is due to ignorance of food contents rather than to poverty. This is shown by the high incidence of malnutrition among the well to do. The poor nutrition cases usually occur more commonly in large families, and it has been shown that the malnourished child is more common in the native-born than among the foreigners. The relation of poverty is shown by the fact that when the food supply of the family is curtailed the child is the first to suffer because he needs food for growth as well as replacement of tissue loss. We all recognize that the thin child is less resistant to disease and has less to fall back on when he becomes ill. This is especially true in tuberculosis.

One thing we do not think of often enough and that is that the malnourished child if left to himself does not tend to become well nourished spontaneously. The percentage is greater among the fourteen-year-old than the seven-year-old children, so there is not much tendency to spontaneous recovery.

The chief solution of this problem, as pointed out, is undoubtedly education. At least a campaign of education must precede and accompany any plan of relief. Parents must be taught to give food well cooked and in the proper amounts. They must be taught that bulk cereals, like oatmeal, give the best results, and that every child must have milk. That nut margarine or margarine is just as nourishing as butter and costs about one-third as much. That tea and coffee have no food value and are of no good to the child. Mothers should be taught to cook food properly, and especially to avoid fried foods. Dr. C. Hendee Smith has said that the frying pan is the greatest single agency of evil in the kitchen.

It is easy to say that the child must take a rest period in the afternoon, but it is essential to tell him how to rest, that he must go into a quiet room where there are no other children, no toys nor books, and that he must completely relax. It seems to me that although it takes more time and much patience in treating these malnourished children, it is absolutely essential that written details be given to the parents in regard to every detail of the treatment, the amount of food, how it should be given to them, how much time they should sleep and rest. I believe every phase of the treatment should be written out for them to take home with them and not trust them to remember vague general advice. The talks to large groups of mothers has, I think, in the experience of eastern men especially, been much more efficacious than trying to handle cases individually. By teaching proper food habits and other essentials of health the schools should graduate their children physically as well as mentally fit, thus eliminating malnutrition as an unnecessary element of national weakness.

DR. WALTER D. HOSKINS (Indianapolis): The purpose of Indiana University in the study as outlined by Dr. Holland is a very commendable one. The paper of Dr. Nesbit was very illuminating. A corporation like Gary that will take up that kind of work inspires each of us to go back to our own communities and do something along similar lines.

The paper of Dr. Reed was extremely interesting, but I cannot agree with the idea that we should advocate compulsory military training. I do think that it is well to have systematic physical training. It is not necessary or desirable to compel our young men to undergo military training in order to develop physically.

The paper that covers the under-developed child is timely. If the rank and file of physicians in general practice can be awakened and made more alert and more effective in dealing with the under-nourished child we can be of great service to our community. We need to recognize not only the under-nourished child but also find the cause. I am convinced that unbalanced feeding, feeding between meals and too frequent feeding are the bad factors in the malnutrition of the child. It seems to me it has been clearly brought out here, too, in a very effective way, that we are not demanding that the rank and file of family physicians know all about the problem of nutrition, all about calories and just how much the child should have. Perhaps it is not in his province to achieve this. But we have had pointed out to us that there are those in nearly every community who have this information, and that it is available.

The work of the man that practices among children is being centered more and more upon the proper feeding of the child, the anticipation and prevention, as well as the correction of feeding defects. Let the physician himself be not backward in cooperating with the mother and the specialist in this. Let it not be said that the mother is better educated than the family physician as to the necessity for skilled supervision of the nutrition of her child.

DR. WILLIAM F. HOWAT (Hammond): Just a comment or two about Dr. Reed's paper. It seems to me we are still laboring under the dread of terminology. The phrase "compulsory military training" seems to arouse antagonism in every community. Perhaps it would be better if we emphasized it as "compulsory physical training"; this might sound better than "compulsory military training". The ends achieved would be the same, the ends sought after are the same. One other feature which Dr. Reed touched upon I think cannot be too much emphasized, and that is the dread in some of the public in regard to the moral deterioration that might be brought about by any compulsory military or compulsory physical training. I think the experience in the late war has absolutely demonstrated the fallacy of that. For the first time in history an army came back which was not a menace to the morals of the community and not a venereal menace to the community. The American army came back not a venereal menace but an example of what can be accomplished for good by means of proper discipline.

DR. JOHN N. HURTY (Indianapolis): In 1901 the schools were superficially examining into the health of school children, but in 1902 the State Board of Health passed a resolution that child hygiene was a subject of the greatest importance. The child is neglected in Indiana and the physician is largely to blame for that neglect. The physician knows and has known all these years that many children who are brought to him for treatment are under-nourished and not properly cared for. Gentlemen, we suffer more from our sins of omission than from our sins of commission. We omit too many duties. The Indiana State Board of Health took up the subject of child hygienic care, especially in rural regions. As a rule the farmer's family is badly nourished. They live principally upon a "fat-carbohydrate diet". They do not have enough green vegetables as spinach, and lettuce. I have eaten 368 meals at farmers' houses for the purpose of nutrition studies. We find upon their tables batter cakes, molasses, corn bread, potatoes, rice, beans, hominy, and coffee, leaving out the leafy vegetables which are so essential for growth and life, they all too frequently leave out

that great essential—milk. I have inspected children in one and two room schools and in many I have found 100 percent of the children deficient one way or another, all needing more or less medical attention. All had bad teeth; you can hardly find a child with perfect teeth. Bad tonsils are very common, and defective eyes, and defective hearing. At one school there were twenty-seven children, every one of them needing attention. One was a retarded girl aged sixteen with dementia precox. I wanted to see why the parents did not look after their children and why that girl with dementia precox had not been attended to. Awful to relate, the doctor had assured the parents that she would outgrow the strange symptoms. Think of that! I wish I had full time to tell you of certain experiences I have had in years of study on this subject.

DR. C. E. REED, Culver (closing): May I comment briefly on the other men's papers as well as my own? I am much gratified with the discussion of the work that is being done at the University and at Gary, showing the tendency for better care of the young people of the state. I have been interested in this problem for many years and am inclined to believe that the responsibility comes home to the general practitioner; not so much to the specialist in diseases of children, but to the family physician who comes in contact with the patients for one reason or another. When a physician is called into a family for mumps or measles he should have his eyes open and find out if there is not something else in that family besides mumps or measles, and his position will make him free to say that this or that condition should be corrected that the children may become better citizens.

Dr. Hurty has brought out a very fine thing. I was asked to help in the inspection of the children in our public schools three years ago, and I feel safe in saying that 75 percent had bad teeth, that 50 percent had diseased tonsils or other physical defects that anyone with half an eye should have seen, and those of us interested in that inspection took care to tell the parents these matters should be corrected.

In regard to compulsory training. Those of us who know anything about the examining boards know that many of the men went into the camps unwillingly, but after they were in the camp and found how much they were benefited they were glad they went in. There seems to be a timidity or reluctance about undertaking some of these things which, if the state advises, will ultimately result in good, and will react for good to those who are subjected to that regime. The sentiment is poorly founded, I am sure, and the idea that we are going to develop militaristic

spirit in our people I am sure is wrong. I think I am well within the field when I say that less than 5 percent of the men who graduate from the distinctly military institution with which I am connected are engaged in any military career, and certainly after a man has carried around a rifle that weighs eleven pounds as part of his regular equipment for a long time does not hanker after it particularly. He has had enough. (Laughter.) But practically every man has said that he would not have given up the physical training and the mental and physical benefit he derived from it. One reason I stay with the school—there is not as much money in it as in some of the specialties—is because I am interested in seeing the men come out with straightforward countenance, good physique and of good, dependable character.

DR. J. C. RITCHEY, Indianapolis (closing): Just one point I wish to emphasize, and that is the importance of the correlation of a large number of the various tests in contradistinction to basing conclusions upon a single test.

DR. O. B. NESBIT (closing): I will leave on the table copies of cards used by us to record height, weight, age, and normal weight. Two cards are punched, one given to the pupil, the other retained.

We had a principal report that the undernourished pupils were poor in scholarship. Our department made a study of 106 underweight, 104 normal, from same classes as underweight, 65 overweight. We found that among the coffee users 46 percent of the undernourished, 34 percent of the overweight, and 69 percent of the normals in weight were good and excellent in scholarship. In those not drinking coffee 52 percent of the underweight, 52 percent of the overweight and 40 percent of the normals good and excellent. Superior scholarship is often a cause of malnutrition.

THE PHYSICIAN

FADS AND FASHIONS OF MEDICAL PRACTICE*

BY

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The terms fad and fashion are related in meaning but vary widely in application. The former has rather a restricted significance. A fad is an individual thing largely, fashion has for its votaries a large number—sometimes the multitude. Fads are transient in duration; fashions extend over a longer period of time and exercise a wide-spread influence. Fads initiate new things which may in time gain the momentum of popular approval, entitling them to be called fashions; and succeeding fashion, the long

*Eleventh of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

continued use of a thing, a method, a habit, an idea, establishes it as a custom of the people.

The faddist is enamored of new things, but his affection for them soon wanes and his fancy goes chasing after some other flame which illumines his vivid imagination. In childhood this characteristic is dominant. It prevails in all of us to a greater or less extent. In some intensity of the trait persists throughout life.

The faddist is generally of the alert type, often artistic or strikingly intellectual. He has inordinate craving for mental stimulation. He is to be found in every avenue of human activity of the higher type. In the realm of literature he at one time develops unbounded enthusiasm for Kipling; presently it is the star of Tolstoy which is in the ascendant; for a time he pays extravagant devotion to Bernard Shaw; next bows before the shrine of Blasco Ibanez; and now makes deep obeisance to the poetry of Edgar Lee Masters. In the field of art his imagination finds greatest delight at one time in the works of the impressionist school; at another he is carried away with the grotesque productions of the cubists. The faddist prevails in politics, quick to condemn and abandon existing methods and just as quick to be caught up by some new and untried remedy for political ills. In the field of religion and education he welcomes with delight striking innovations. He views with ill-concealed disgust the conservatism of old methods.

The slow-going world is the better for these aggressive individuals who call attention to new and suggestive things, even if in the long run many of them are found useless or harmful. Faddists sow the new seed, but it remains for the conservative and more critical judgment of the average mass of mankind to harvest the good grain and cast out the chaff.

What then of medical fads? Being human, is it to be presumed that we are exempt from our full quota of faddists? Literature, art and music, being temperamental accomplishments, naturally have a large proportion of faddists. Medicine on the other hand, with its matter-of-fact ways of critical observation and analysis has less dreaming, and perhaps less faddists, and yet a surprisingly large number.

In not a few medical men faddism takes the form of raiment. What a delight they find in the newest cut of coat, or a stylish hat; or again the same impulse finds outlet in an impressionist style of new automobile. Let us admit this is simply personal vanity, not without virtue, however. Certainly it is less to be condemned than slatternly dress, or uncouth acts—ill-mannered affectation sometimes assumed by physicians, which is as much a fad as the stylish clothes of the dandy.

In others this same spirit of craving for novelty and distinctiveness takes the form of speech. Such a person discovers a new word in medical literature, which he parades as another would his stylish clothes. In pronunciation, too, he finds a favorite avenue of expression. Scarcely had we come to pronounce with ease the word *bacillus* when he proceeds with great emphasis to jar our ears with "backcillus". From a sojourn in the east he brings home the broad sound of "a" to clash with the short, flat "a" of our middle west so that when he says *class*, we scarcely recognize the word. He chants it with the same dignity that a choir would sing an anthem. These sallies of incidental instruction always rivet one's attention. But the medical man who is a votary of faddism in pronunciation, of course, runs great risk of diverting attention from the main theme of discussion. However, since it affords him such manifest pleasure and instructs his auditors, why should complaint be offered?

Akin to the pronunciation fad is the apparent delight an occasional physician takes in giving to a new sign or symptom the name of the author who has described it. How mystifying the name! Why rob the newly discovered sign of its charm by a common-place designation which would give inkling of its nature and recognition? He always refers to Grocco's sign; never to the para-vertebral triangle.

Faddism is inherent in most of us. It is chiefly a question of degree. Who for example has been able to resist the impulse to fly off at a tangent now and then in therapeutic procedure? A new remedy is promulgated from a great pharmaceutical establishment—heralded in suggestive phrases. The flare of promise illuminates our imagination. It is the temptation to gamble. We stake our hope on it. We prescribe it, talk about it and coddle ourselves into believing it is of value. Presently we see things more clearly, enthusiasm wanes, and by and by our pet goes into the discard. Then our attention is attracted to another therapeutic rocket fired into the professional sky. So one after another of these therapeutic will-o'-the-wisps is chased—phantoms which seldom bring substantial realization. The keen business acumen of the manufacturing pharmaceutical houses is constantly tempting us with these things. What infinite variety they place before us! Infinitude alone indicates the limit of new things they will continue to present to lure the unwary. Here is where most of us have been faddists—often to our later shame and the discredit of the profession. Who of wide experience can escape the charge of guilt in this respect? Should we not more generally resist the faddish impulse to therapeutic experimentation at the bedside?

Here of all places we should be governed by the work of painstaking investigators of pharmacologic products—able clinicians with ample facilities and laboratory men of sufficient ability to justify our faith in their conclusions.

Since the advent and multiplication of laboratory methods of diagnosis not a few physicians have become faddists in their use. I would not have the reader misjudge my estimate of the extreme value of these methods as aids, sometimes indispensable to diagnosis. The point contended for is that we have too often been prone to magnify their importance; not infrequently allowing them to push into the background other procedures of even greater value. The physician gets into the habit for a time of pursuing a one-track route to diagnosis, when he might arrive at the diagnostic haven by other roads, more certain if not so spectacular or short-cut. The aeroplane is the quickest route across the Atlantic, but steamship offers a safer passage. Too often we have faddishly emphasized the microscopic diagnosis of new growths, cultures for the recognition of diphtheria, gonococci for the recognition of specific urethritis, tubercle bacilli for pulmonary tuberculosis, Widal for typhoid, Wassermann for syphilis, x-ray for gallstones, and many other special technical methods, when our business as a physician taking a broad view of medicine should be, not to overload these special things with responsibility, but to assemble with care clinical data for the foundation and superstructure of diagnostic truth. Then let this be illuminated by every possible light of special medicine.

The study of fashions shows that they are uniformly wavelike, beginning in a small way, rising gradually to a crest of popularity, and then receding into disfavor or abandonment. The chief psychologic forces making for their growth are, first, the universal craving of the human mind for novel excitement and entertainment. Secondly, through the massed suggestion of numbers, reacting upon each other, the wave of popularity is given tremendous momentum. The life cycle of fashions is variable. Style of dress in the feminine world is rapidly changeable—less so among men as note the century-long popularity of the dress suit. Less frequent but just as characteristic are the wave-like movements in the manners of social life—the forms of salutation, speech and written address, the changes in dancing and other recreational amusements. Needless is it to multiply illustrations. It matters not what particular field of human activity is considered, the same psychologic elements of fashion will be found present directing and controlling to a large extent those who make up that following. The medical profession, therefore, is governed by the same laws of fashion

as other classes of society. True our scientific training should make us less susceptible to fashion waves, yet close analysis of the facts shows that we are much like other folks.

The influence of fashion in medical practice is well-nigh irresistible. The mass suggestion, the fact that professional opinion is running one way, leads most of us to drift with the current. It is not merely that other physicians are doing thus and so that we fall in with the majority; the laity push us into the current with the humiliating taunt that we are laggards or slackers if we do not get into the swim. The principle is the same as that which compels us to change the style of our clothes or be considered queer and a back number.

Almost every new style in medicine has had some practical or scientific basis for its inauguration. Beginning in a small way, its volume increases to a flood, carrying the rubbish of misuse or abuse, followed by subsidence of the wave of professional approval, or perhaps the drought of abandonment. Only a few of these are offered in illustration. Nearly all of them relate to therapeutic procedure. They carry some good just as they are impregnated with some bad—representing the wobbling, struggling effort of fallible human beings toward better things. The problem of prime importance in regard to any fashionable movement in medicine is to conserve in the end the elements of good—and guard against the natural reaction of condemnation and abandonment. Some of these movements are limited in extent and transient in duration; others take deep hold upon the profession, become the universal practice, and so established in respectability that not to follow them is to be a medical heretic.

A very dominant medical fashion during the early part of the past century was phlebotomy. Any practitioner who ventured to question its value was professionally ostracized or condemned as derelict in duty. For many years it held sway as the most useful therapeutic procedure. Such was the verdict of careful students and practitioners of the time. Yet note the gradual decline of its popularity and final abandonment. Are we to conclude that they were entirely mistaken in their judgments? On the other hand are there not very good anatomic, physiologic and pathologic grounds for performing phlebotomy in certain cases—as for example uremic coma, cerebral hemorrhage associated with high blood pressure? Yet who has the courage in these days to advise phlebotomy? Strange is it not that so intelligent a profession should be so dominated by reactionary prejudice?

The overweening pursuit of drug therapy has constituted more than a fashion. It has become a dominant professional custom, bolstered up

by prejudice which it is difficult to shake off. Born centuries ago in an age of mysticism, even time and unemotional science have made slow progress in getting the light of progress through the thick skin of our superstitions. The lay-world bows before the shrine of drug therapy—looking longingly for the Fountain of Perpetual Youth or a mysterious potion which will work a miracle within the body. These words are not to be construed as a condemnation of drug therapy *in toto*; but a plea for the use of drugs upon proved, rational grounds. The driving impulse to search after the mysterious potion which will restore health is not unlike the human longing for life hereafter. The *urge* points toward truths which may sometimes be revealed. In drug therapy a few precious revelations have been made. Experimental pharmacology in our own day has brought to light many therapeutic facts of extreme value. Let the search go on, to bless coming centuries with other discoveries, wrought out of patient experimental toil. But this does not justify the profession in making a fetich of drug therapy, as do laymen who are biased through the inherited mysticism of past centuries. The quack recognizes this tendency of the race, and accordingly makes appeal to credulity through the mysteriousness of his nostrums. Pharmaceutical manufacturers cater to this same racial tendency in the medical profession, inundating us with proprietaries and new products bearing alluring titles and suggestive promises.

Polypharmacy has constituted the most conspicuous aspect of drug therapy and its worst sin. Even to the present day its influence is felt in the complex formulæ of proprietaries and official compounds, although a strong and wholesome tendency exists toward simplicity in drug administration, not characterized by the enthusiasm, however, which entitles it to be called a fashion.

A fashion of the last century growing out of, and in a measure succeeding to, multiplicity of compounds was magnitude of dosage. "Doctors of the Old School", still amongst us, tell interesting narratives of the large doses formerly employed, notably in the administration of mercury. In protest arose the sect of Hahnemann advocating minimal dosage and specific medication—erratic extremes in opposition to prevailing practice. This served a useful purpose in breaking the high wave of excessive dosage and nauseous mixtures. So has come to decline this therapeutic fashion.

As the wave of fashion for large dosage and bulky, nauseous mixtures subsided, another arose, supposed to correct the old abuse—namely, coated pills and tablets. Three important

agencies have combined to promote the popularity of this type of medication. First, patients preferred tablets to the nauseating compounds; secondly, they proved a convenience to physicians, especially those who were compelled to do personal dispensing; and thirdly, the pharmaceutical manufacturers seized upon pill and tablet production as a lucrative avenue to business success. That this plan of drug administration has distinct advantages entitling it to a place of permanency cannot be doubted. Admitting its virtues it is just as important to give serious heed to dangers lurking in the method. Who can deny for example that the manufacture of innumerable formulæ in pill form has tended to destroy initiative and skill in the art of prescribing? In the next place the multiplication of manufacturers has put upon the market many pills and tablets which are inert; or even granting virtue in their composition, they may be so combined, dessicated or compressed as to render them insoluble. Very recently a most intelligent patient made special request that I should not prescribe tablets made by a very well-known pharmaceutical establishment because on two different occasions he had found the tablets passing by the bowel almost unchanged.

A very real danger is that the physician will acquire the pill-vending habit. He becomes more a tradesman than a physician. It encourages office dispensing which at first thought looks attractive, but in the end leads laymen to think of the doctor as a man peddling wares. They naturally reach the conclusion that they pay for medicine rather than advice. The ultimate effect is a lowering of professional prestige. Pill and tablet prescribing is a prevalent fashion which calls loudly for reform. It is producing in the ranks of the profession a host of therapeutic nihilists. Out of the infinite variety of tablet formulæ which clutter his office the physician comes finally to lose respect and confidence in drugs. He drifts into the attitude of saying to himself, "Oh, well, one thing will do as well as another." The urgent call of the hour in regard to this fashion of our time is not for abandonment of tablet therapy but for the production of trustworthy products and simplified composition. And above all else, the pill and tablet craze should not be permitted to usurp the place of art in prescribing other things and methods which will better achieve the relief of the patient.

In Jenner's great discovery, with its scientific suggestiveness and vast practical benefits, the soil was fertilized for the growth of even greater rewards in the prevention of disease and the advancement of therapy, through the revelations of pathology inaugurated by Pasteur and his followers. The outcome has been the rapid

development of the system of biochemical therapeutics. Antitoxine led the way. Its great practical value in the cure of diphtheria once proved, hope was aroused for similar benefits in other infectious diseases. It attracted at once the most noted pathologists, pharmacologists and clinicians, who have been endeavoring to work out scientifically the control and cure of different infections along similar lines. Great pharmaceutical houses have expended enormous sums in the erection, equipment and manning of laboratories for the purpose of manufacturing biologic products for the treatment of disease. Antitoxins, serums and vaccines of infinite variety have been produced. An expectant profession has been taught to have faith in these things notably by their experience with diphtheria and tetanus antitoxine; also from the occasional aid by the judicious administration of tuberculin in incipient pulmonary tuberculosis, as well as some other forms of Koch infection; again by the obvious benefit noted in some types of gonococcus infection; and quite markedly in certain kinds of local infections by autogenous or even stock-vaccines, when the general body resistance is good. These conspicuous achievements have caused the wave of biochemical therapy to rise very high in professional esteem. Encouraged by experience to have faith in the movement it is not strange, therefore, if the profession should be dazzled by the brilliancy of accomplished things, and go blindly about the further application of the plan in therapy. This form of treatment has become an overweening medical fashion of our day and generation. As in other fashions may it not be true that we are now being borne upon a wave of enthusiasm in which unwarranted excesses are being committed? The injection of a foreign protein into the body is never to be taken lightly. The indiscriminate use of vaccines especially is not only unscientific, it is senseless and fraught with grave danger. Of course no account is here taken of those who use vaccines with venal intent—merely because popular, spectacular and a form of therapy in which considerable fees are possible. Such a person is no better than the most arrant quack. This appeal is made to the man who is carried away by the wave of popular approval of this form of therapeutic procedure. The injudicious and unscientific application of the treatment can only bring harm to many patients and embarrassing discredit upon the profession. The tocsin here sounded then is greater caution in the use of these measures. Make sure that all the indications are present calling for their application—then use them, but with the care which will avoid harm and insure benefit to the patient.

The Council on Pharmacy and Chemistry of the American Medical Association has done a

conspicuous service in trying to correct the harmful trends in vaccine therapy. The volume soon to be issued by the Association will prove a most valuable and reliable guide to the profession in this popular and useful phase of therapy.

For consideration last has been reserved a medical fashion destined to wield greater influence than any which has preceded—operative surgery. From century-old practices of the art, it has arisen triumphantly in spite of deepseated lay-prejudice. Bacteriology first laid the foundation for aseptic surgery, and experience soon emboldened the operator in surgical attack. So dashing have been the battles won that not the profession alone but the world as well, stands in awe and admiration of the achievements. So won over to operative procedure is the public that now the layman's query in perplexing cases is apt to be: "Would an operation offer relief in such a case?" Thus has grown faith based upon works. Among general practitioners the ultra-conservative have been driven by popular opinion to espouse more aggressive, life-saving tactics; and some practitioners have been charged by a critical public as slackers and laggards in the professional procession because slow to accept the surgical route to relief.

The final yielding of the reactionary elements in medical practice to aggressive surgery has come about chiefly through the slogan of focal infection. With the rising wave of surgical fashion, one after another anatomic region has been invaded by the knife, with sanguine hope of relieving both the local and the general symptoms. Amongst these may be mentioned in sequence the ovaries, tubes, appendix, gall-bladder, tonsils and teeth, each of which has been charged with blame for the systemic manifestations. Often the accusations proved true for relief followed attack upon the suspected focus. In such cases we justly congratulated ourselves upon the wisdom of the course pursued. But we must be just as honest in acknowledging failure in not a few cases—in truth some show an aggravation of general symptoms (in the heart, joints, kidneys, etc.) and in a few, grave conditions are provoked. Let us not then with thoughtless minds or unfeeling hearts make unseemly haste to advise surgery. One needs not to search far to discover in the evolution of this fashion, excesses which shame us as we look back at them. Who will ever be able to compute the ovaries which were uselessly sacrificed two or three decades ago? In the light of this experience does it not behoove us at this time to inquire if perhaps in the matter of the tonsils and teeth we are not repeating the same unwarranted slaughter of parts which should be more frequently conserved? Let not these words be

construed as a protest against justifiable surgery; rather let it be considered an earnest appeal for that thorough study of cases which warrants surgical procedure. In proof of the contention here made three examples may be cited from the records of patients admitted to the Robert W. Long Hospital during the month of February, 1921. The histories of these cases show a long list of operations, all performed in other institutions with one exception—tonsilectomy.

Case I. S. M. Single Woman.

At age 23, cystic ovary removed on the right side.

At age 24, left ovary, tube, and appendix removed because of pain in the side. A sinus resulted which required several operations to secure healing, extending over two or more years.

At age 25, one breast was amputated, because of tender and infected lumps.

At 27 the other breast was removed for similar conditions.

At age 30, admitted to the Robert W. Long Hospital. Complaint, pain low down upon either side; nervous and hypochondriacal. Chronic amygdalitis diagnosed—tonsils removed. Discharged unimproved.

At age 31, readmitted to hospital, pains of indefinite nature through bowels; occipital headache. Discharged unimproved.

At age 32, readmitted to hospital, complaining of pain in the stomach and bowels. Final diagnosis: psychasthenia with mental inferiority.

Case II. J. S. Male. Appendectomy in 1916.

June, 1919, operated for suspected gall-bladder trouble, and again in December, 1919, for adhesions, supposedly following the previous operation.

June, 1920, another exploratory operation was done in an eastern hospital, without finding anything definite.

February, 1921, patient was admitted to the Robt. W. Long Hospital showing all the typical subjective and physical symptoms of a *tabes dorsalis*; and with serological findings, positive.

Case III. E. G. Male. Appendectomy in 1916.

Operated in July, 1917, for duodenal ulcer; gastroenterostomy done.

November, 1917, plastic operation done to relieve contracture.

June, 1918, duodenal ulcer excised.

May, 1920, old gastroenterostomy cut off, and gastro-jejunal ulcer excised.

February, 1921, admitted to Robt. W. Long Hospital. His symptoms beginning in 1916 have not in the least been relieved by any operation. All serological findings are positive of lues; and he is now suffering from typical crises. Query: Have not all the symptoms and lesions been syphilitic? Five of the six operations have been made by surgeons known most favorably throughout the country.

These errors, superficial study of cases and precipitate appeal to surgery, constitute the gravest danger growing out of the dominant fashion for operative relief. In the long run it can but react harmfully upon legitimate surgery.

Besides these sins of omission and commission, are there not perhaps other dangerous channels into which the prevailing fashion may be leading? For example whilst the strict application of asepsis makes the able operator bold, it is apt to lead the incompetent to reckless extremes, resulting in human sacrifice. The simplicity of aseptic and surgical technique in the main has tended to produce an army of technicians, without breadth of surgical grasp or the wisdom of surgical judgment. False standards are set up, cheapening both the art and science of the profession. The call of the hour is not for less technicians but for more real surgeons, who pin their faith to a working knowledge of anatomy, physiology, surgical pathology and the ability to deal with problems and emergencies in the light of this knowledge. Subsidiary to these, but very important of course, is thorough training in the mechanical phases of the art.

Begotten of surgical fashion, is observed not rarely, the sin of arrogance. Surgery has dramatic appeal to the lay-mind. The egotism of the operator is fed by popular acclaim. The less spectacular general practitioner sometimes becomes moody and envious, charging the public with ungratefulness. The surgeon is prone to conceit and self-sufficiency. Who would have the temerity to question his wide experience? He has seen hundreds of cases of appendicitis; why then should the general practitioner suggest the possibility of beginning pneumonia with pain referred to the abdomen? Would it not be interesting to know how many gall-bladders have been drained in tabetic cases with abdominal crises? The writer can enumerate a considerable list. Sometimes the general practitioner is justly blamed for dallying when aggressive surgery would save life; and I can say with equal truthfulness that I have seen perfectly healthy ovaries, appendices, tonsils and teeth removed. That these things happen is neither to the credit of the one nor the other. The exhortation is for greater diagnostic care and closer cooperation.

An outgrowth of the prevailing surgical fashion in quite a few men has been the development of the vice of avarice. The trend toward big business the world over has too often taken hold upon the surgeon. The modern hospital with its equipment and system has enabled him to concentrate and facilitate his work. It offers likewise better opportunities for scientific endeavor, as well as surgical relief. It is an evil day for him if once he becomes infected with the germ of avarice, for the malady is difficult to cure. His constant thought then becomes "big business"—many cases and large income! Assistants make preparatory study of his cases and take entire charge of the post-operative management. He is prone to lose personal touch with patients and develops into a cold-blooded materialist. He becomes a brilliant technician and operator, known to the lay-world chiefly by his fabulous income. His career takes on the mercenary aspect. He loses in skill of scientific approach to the operative attack and fails to cover disease retreat against the dangers arising in convalescence—thus neglecting one of the main principles in first class generalship. Fine assistants he may have (perhaps better than the chief himself), but the point is that he is passing for something that he is not. The three indispensable links of operative surgery are: thorough diagnostic study, the mechanical phase or operation and the post-operative management. "Big business" prompted by avarice will seek to get by with the operative link only. This is not fair to the patient; it is worse for the surgeon who is neglecting the intellectual, judicial and human side of surgery for its mechanics, its narrow materialism and "big business".

It will be quite generally admitted I think that the outstanding fashion of medicine for our own day and generation is operative surgery. That it has shed imperishable luster upon the profession who can deny? But like any rising wave of fashion, some drift is carried along with the fine ships of achievement borne upon its crest. This is to be expected in any case, remembering the fallibility of human wisdom and human judgment. Is it not meet therefore that we should take counsel one with another about the dangers? Most of all is it not incumbent upon those prominent in the surgical field to sound the note of warning? Is not the human body a sacred temple of which we are the earthly custodians? Shall we permit defilement of this sanctuary without due preparation and reverence for its wonderful mechanism? Does every new focal symptom constitute sufficient warrant for rushing to vaccines or surgery without adequate study of the case from every angle, with a summary of conclusions, justifying the one or the other procedure? In other words the route which every conscientious practitioner should follow is that of painstaking, scientific inquiry and not always the highway of fashion. There may be other roads safer, better and more direct to the haven of health for the sufferer. Our highest duty is to ascertain by careful search the best route and pursue this steadfastly.

SALIGENIN AS A LOCAL ANESTHETIC FOR THE FEMALE URETHRA

ARTHUR D. HIRSCHFELDER and H. M. N. WYNNE, Minneapolis (*Journal A. M. A.*, Dec. 25, 1920), assert that saligenin is a practical, nontoxic, local anesthetic which is distinctly useful in work on the female urethra and bladder. It is about one-fifth as toxic to mammals as procain, and about one-fiftieth as toxic as cocain. In all cases, 2 c.c. of a 4 per cent solution of saligenin was injected into the urethra. A working anesthesia was obtained in every case, apparently as satisfactory as that produced by a 10 per cent solution of cocain. There is a great advantage in using this anesthetic of low toxicity, for a considerable quantity of the solution can be injected into the bladder after catheterization. This reduces the spasm so that a rapid and satisfactory examination can be made.

ACTION OF CASCARA SAGRADA

HUGH MCGUIGAN, Chicago (*Journal A. M. A.*, Feb. 19, 1921), does not agree with the view usually set forth in textbooks that cascara sagrada is an ideal drug and fool proof. He would confine its use to those cases in which from 1 to 2 Cc. has a definite action. Larger doses would seem to do more harm than good. They may produce an inflammatory condition of the bowel, with pronounced nausea and griping. The nausea may be produced by the therapeutic doses recommended in some textbooks. It only rarely leads to vomiting. Cascara should be used only as a laxative, never as a cathartic. When more than 2 Cc. of the fluid extract is needed to produce a laxative effect, another drug should be added or substituted. Small doses several times a day seem to give better results than the sum of these doses given in a single dose.

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EDITORIALS

CANCER INFECTION

Of the unsolved problems of medicine there is none which offers a more inviting field than the etiology of cancer. And despite the endless amount of scientific investigation that has been pursued for decades by the best medical minds in the world, we seem about as much in the dark as ever, as to the ultimate solution of this knotty problem. However there has been acquired a vast fund of valuable information which, even though much of it be of a negative kind, will finally lend tremendously toward the end sought.

Many promising clues have in the past been relentlessly pursued only to find that in the final analyses, the answer was not there. Among such may be mentioned Cohnheim's theory of embryonic origin, Hauseman's "anaplasia", Ribbert's "tissue tension", Adami's "habit growth", "heredity", etc. Each has been proven to have its fallacies, and for many years the failure of experiments at transplanting human cancer from one person to another has been accepted as proof of the non-transmissibility of cancer from person to person, despite the success of such experiments upon the lower animals. The theory of long-continued local irritation becomes attractive by the illustrations of the smokers' cancer, the cancer of the betel-nut chewers, that of paraffin workers, chimney sweeps, cancer of the breast, more common in those races where the breasts are covered and pressure exerted by the clothes than in those whose breasts were left uncovered and exposed to the air, a fact brought out by W. J. Mayo¹.

Electric irritation, as in x-ray workers, and heat as in workers in certain trades and the Kangri burns of Kashmir causing cancer of the abdominal skin under the charcoal warmers worn over the abdomen, are credited with an etiologic valuation. W. J. Mayo is not averse to ascribing to hot drinks and food a place among the causative irritative factors in cancer of the alimentary tract, particularly gastric carcinoma where there is already provided the acid medium so favorable to the growth of cancer.

One of the most interesting among the recent articles upon the subject is that of Ochsner² on "Cancer Infection", wherein he calls attention to the fact that only patient perseverance revealed the tubercle bacillus, the spirochæte of syphilis, the bacillus of leprosy, the plasmodium malariae, etc. Hence we should not accept a negative answer as final in the search for an organism that fulfills Koch's postulates upon the cancer problem. He recalls the fact that cancer occurs almost exclusively in those portions of the body exposed to outside irritation, including the gastro-intestinal tract which is constantly in contact with filthy food in locations in which stasis insures long-continued contact and persistent irritation. Cancer of the stomach is common in manure-eating people, i. e., those eating raw vegetables growing in soil fertilized with night-soil or with barn-yard manure. Such condition maintains with the Japanese who eat abundantly of such vegetables and with the Chinese who fertilize their gardens with human excrement, in both of which races there exists a high incidence of carcinoma of the stomach. On the other hand the people of India with their uncleanly skins are frequent sufferers from cancer of that appendage. Likewise barn-yard fowl and pigs, both feeding upon manure, if they survive young life, are very prone to cancer. Dogs, rats and mice are subject to cancer while animals that eat more cleanly food, like the rabbit, seldom have it.

Marine and Gaylord developed cancer on the gills of fish living in ponds infected with excrement, while control animals in pure water remained free from the disease.

In that part of Luckau where human excrement is extensively used for fertilizing vegetable gardens, Behla found the populace severely afflicted with cancer.

Ochsner believes the most convincing argument for the infectiousness of cancer to lie in the studies of Smith, who has proven to the satisfaction of most competent judges that cancer in plants is due to a microorganism which he has been able to isolate and cultivate and which produces cancer when inoculated upon healthy plants.

On the other hand, C. H. Mayo very pertinently observes³ that "in taking a general survey of the various theories and reviewing the clinical evidence, it would seem that not one, but several conditions are essential to the development of cancer. The influence of heredity probably does not extend beyond an inherited cell weakness in which extra demand on the

(1) Mayo, W. J., Surg. Gynecol. Obstet. Vol. 26, No. 4, p. 367.

(2) Ochsner, A. J., An. of Surg. Vol. 73, No. 3, pp. 294-301.

(3) Mayo, C. H., An. Surg., 1919, LXX, pp. 237-240.

cell for division may early exhaust its controlling agent. The great influence of local irritation, which in some instances is undoubtedly chronic infection, is a fact quite generally accepted. No one theory, however, can account for the change in the cell that causes it to adopt lawless existence and to lose its harmony with community life."

THE RECENT LEGISLATURE AND THE MEDICAL PROFESSION

The attention of our readers is called particularly to the list of bills published in this issue, affecting the medical profession, which were introduced at the recent session of the Indiana legislature, and also to the roll call on House Bill No. 267 in the lower house. In all, thirteen bills were presented, including one amending the present law in regard to trained nurses. The latter bill was the only one passed and signed by the governor. House Bill No. 267, the substance of which was indorsed by the Indiana State Medical Association at the last annual session, was the one in which the profession and the public were most deeply interested. The bill presented amended the present law by inserting the words "or the healing art" in the old law after the words "practice of medicine, surgery and obstetrics." This change was intended to strengthen the interpretation of the scope of the old law. The other feature of the bill presented merely involved annual registration and payment of \$2 for the purpose of enabling the State Board of Medical Registration and Examination to maintain a correct list of physicians actually licensed and in practice in Indiana, and to afford a fund to prosecute those who violate the law. At present it is impossible to keep trace of those who have been licensed; many of them are dead, others have moved away, and quite a few have retired, and, in some instances, the name and license of such individuals have been used by others. It is impossible to keep trace of the quacks, itinerants and other humbugs unless we can have an annual registration, and it is impossible to enforce the law without there is a fund for that purpose. The theoretical notion of some physicians that the state should pay for the prosecution and enforcement of the law may in one sense be correct, but practically, it is utterly idle. The chiropractors, not one of whom has a legal right to impose upon the public and collect fees for their alleged professional services, have nevertheless shown a commendable spirit in one respect—that is, willingness to spend plenty of money to fight legislation affecting them unfavorably, and to promote legislation which they desire. It is regrettable on the other hand that

some of the members of the Indiana State Medical Association are not willing to pay the small pittance annually which would secure enforcement of the law and would put these pretenders out of business. P. T. Barnum was right when he said, "a fool is born every minute." It is amusing, as well as deplorable, to see how many people are willing to run after every new fad and willing to spend their money freely for the purpose. Chiropractors claim to have but one single therapeutic resource,—that of their so-called "spinal adjustment." They find plenty of people who are in need of suggestive therapeutics for imaginary and sometimes for real ailments who open their pocketbooks and cheerfully allow the chiropractors to "pull their leg" for the privilege of having their neck pulled. Not one in a hundred of those outside of the medical profession has any comprehension of the significance of therapeutic suggestion and very few doctors appreciate its real value when honestly and intelligently used. Hence the fraudulent use constantly flourishes.

Owing to the illness of the Chairman of the Committee on Public Policy and Legislation, active efforts to secure the passage of the registration bill were not undertaken until the session was almost half over. If substantial progress had been made with it at the beginning of the session, it probably would have passed.

The chiropractors had a member of the legislature in the person of one of their cult from Allen county, and they have spent several hundred dollars, including the practically constant attendance upon the legislation of two of their attorneys, and they introduced a bill in the Senate and one in the House. There was no difficulty in defeating their bills. The one in the Senate proposed the creation of a special Board of Chiropractors, and provided absolutely no educational requirements prior to their entrance to the so-called chiropractic schools. In the House a bill was introduced proclaimed as merely a definition of chiropractic, but which Representative Kingsbury rightly denounced as a fraud because it proposed not only to define chiropractic and exempt it from the operation of medical laws, but also to permit anyone to practice chiropractic without any educational requirements whatever.

Since the creation of our present medical law twenty-five years ago, the Indiana State Medical Association has done wisely in emphasizing the fact from the very beginning that its purpose was to establish and maintain high educational standards, and so far as the State Board of Medical Registration is concerned, its chief function was to advance the standard of education from year to year so as to maintain as nearly as possible harmony and uniformity with the general advancement of medical education

as expressed in our best medical schools and in the best laws adopted in other states. Under our constitution in Indiana our medical law is classed as a police regulation. This makes it incumbent upon the local prosecutor in each county to prosecute those who violate the medical law, and it also makes it incumbent upon every county medical society to see that the local prosecutor does his duty. The Attorney General of the state has nothing to do in prosecuting an automobile thief in a distant county in a state, but the prosecuting attorney in the county where the theft occurs is compelled to do so. The integrity and the ability of the county prosecutors, and the loyal support of the medical profession in each county will determine the success of the enforcement of our present or of any other medical law. It is gross class favoritism and a violation of the law to permit a "chiroquacktor" or any other quack, to practice without submitting to the same requirements that others must comply with.

The "chiroquacktors" had rather rough sailing in the recent legislature. They came to the bat rather confidently, in view of the fact that they had a member of their cult in the lower house and two attorneys constantly on the job, but their senate bill introduced early never survived the hearing before the Committee on Public Health, where its fraudulent character was mercilessly exposed by representatives of the Indiana State Medical Association. No objection was made to anybody being a chiropractor if he so desired, but insistence was made that every one assuming the serious responsibility of treating the sick should have ample educational preparation. No lower standard for chiropractors should be adopted than that which is enforced upon all others who now obtain license to practice the healing art.

The Ross bill in the lower house had its neck unmercifully wrung and its "spinal adjustment" very much disturbed by Representative Kingsbury, who denounced it as a fraud and a sham, and declared that its author had endeavored to convey the impression that it was simply a definition of chiropractic, whereas in fact it was both a definition and an enabling act and would have permitted anybody to practice chiropractic without any education whatsoever.

While it is not always possible to secure progressive legislation, it is generally easily possible to prevent lowering the standard. The average legislator is not willing as a rule to put himself on record as favoring class legislation or taking a backward step in educational matters.

California and Louisiana require an annual renewal license fee of \$2, and North Carolina requires an annual registration of \$5, while Delaware requires an annual commercial license fee

of \$10, as shown by an abstract of the medical laws and board rulings published by the American Medical Association in 1919. The medical laws are notably well administered in these states, and it will be possible to do the same in Indiana if we have annual registration and a small fee to support and enforce the law.

FIGHTING THE CHIROPRACTORS

There is no question but that the chiropractors are a distinct menace to the public as a direct result of their ignorance and incompetency, and their willingness to attempt to alleviate any kind of sickness or physical abnormality through what they call "adjustments". They are shrewd enough to realize that the only way that you can make quackery and fraud profitable is through publicity brought about by advertising. The propaganda that has been started by chiropractors and spread by the public press during the last few years, and more especially during the last few months, illogical, inconsistent, false and deceptive as it has been, has resulted in a rather widespread popularity for the cult and its fake treatment, though we believe that this popularity for the most part is confined to people who are either naturally mentally warped in their judgments, or thoughtless when it comes to the selection of attention for ills or physical abnormalities.

No doubt the chiropractors as well as other pseudo-medical cults would not have gained any foothold had the regular medical profession taken any steps to educate the public concerning the fallacies of a so-called treatment that is based upon such false premises. Medical men have been so afraid that they might say or do something that will be misconstrued as advertising themselves that they have permitted all sorts of fiction concerning themselves and concerning the art and science of the practice of medicine and surgery to develop and grow strong and popular with the people without a word of protest, and without the slightest effort to put the public in possession of the facts. The old saying, "Truth is mighty and will prevail," sounds well enough, but sometimes it is a long time before truth prevails, and in the meantime a lot of damage is done that could be prevented if those who know the truth would only make themselves heard. It is scant comfort to the mother who has lost a child from diphtheria in the hands of the chiropractor to find out, when the health board steps in, that she has made a serious mistake in employing an ignorant quack to care for a disease that is fatal in less than 2 percent of the cases when attended by a competent practitioner of medicine.

The question arises as to just how much the regular medical profession owes the public in

the way of offering advice and protection. If we owe the public anything at all we certainly owe it a frank statement as to those questions concerning public health which we know to be true, and if there are those who are preaching and practicing fraud, then it seems to us that it is the duty of the medical profession to expose the fraud. The charge probably will be made that any efforts on the part of the medical profession to suppress chiropractic is based upon jealousy or retaliation, and therefore may be counted as persecution of a new cult that does not happen to believe the same as we do. However, we owe something to the public, and even though we know that chiropractic will die a natural death, just as all other fraudulent medical teaching and practice has died, yet those who are losing health and perhaps lives, to say nothing of being swindled and imposed upon when curable or remediable illness or physical imperfections are being trusted to chiropractic manipulation, deserve protection, and the only way they can get it is through the aid of the medical profession which is able to furnish the truth concerning this monumental fraud.

There is a difference of opinion as to whether the chiropractors should be prosecuted for practicing medicine without a license, and in most states chiropractors are law breakers, or whether the medical profession should begin a campaign of education with the end in view of letting the people know the ignorant and fraudulent character of the practice that is being used under the name of the chiropractic to delude and swindle the people. We are convinced that the venality of the public press is responsible for every swindle, chiropractic included, so perhaps one of the best ways to put chiropractic out of business is to show newspaper editors and proprietors how they are not only a party to a swindling game, but are directly aiding and abetting law breaking when they boost the chiropractors' game. An appeal to an editor's conscience will have no weight, for the average newspaper editor has no conscience when it comes to a question of dollars and cents, so the best way to reach him is to make him understand that in the long run he is dollars ahead if he refuses to aid in promoting the swindle, and he will have the added satisfaction of having a clear conscience.

Concerning this question of propaganda, we are inclined to sanction the suggestion made by the Grant County (Indiana) Medical Society in which, discussing the exploitation of chiropractors and its menace to the public, they say:

"We believe these propagandists have achieved a prominence through their extensive publicity where they have become a menace to all national and state health programs. 'A lie is a lie until it's in print and then it's the truth.' They print their falsehoods and the public can not judge.

"We believe there should be a plan evolved, a nation-wide plan, to present medical facts to the public which will enlighten the public on health topics and meet the falsehoods of all propagandas which endanger public health.

"We believe that the American Medical Association should develop this plan, and should employ the best talent in the country to assist in getting it before and keeping it before the people. We believe if the American Medical Association took up this work seriously, and evolved an efficient but dignified program, that the county and state societies of the country would co-operate with them and arrange their budgets accordingly."

No doubt a little spasmodic effort here and there is not going to accomplish results, and therefore the suggestion that widespread and persistent efforts to check the chiropractic exploitation is the only way by which the problem can be met successfully.

Quite another plan of attacking the chiropractic "humbug" is that adopted by the Washington County (Indiana) Medical Society, which very recently has published in the local newspapers an authentic account of the Rubin case, and has decided to fight chiropractic, which has gained a foothold in their midst, in the manner suggested in a resolution unanimously passed and made public in the newspapers:

RESOLVED: In order to protect the public from its own carelessness, or its negligence, the medical profession is frequently called upon to assume a stand which directly opposes the wishes and desires of some members of the community. We note this antagonism in case of epidemics that if unchecked would cause great suffering and loss of life. We now feel that a greater menace exists than that of an epidemic of disease. You are besought through colorful advertisements of half truths, alluring promises of miraculous cures, to place your precious possession, your life, in the hands of men unskilled in the art of healing, and ignorant both of the principles that control the body in health, and of the pathological manifestations in disease.

Since the day that Eve yielded to the blandishments of the devil, to the present time, men have been misled by alluring promises and brazen falsehoods, and have parted from their most precious possessions with little chance of ever recovering them.

We feel it our duty to protect you from the follies and dangers of all fakirs and confidence men who profess to deal in special and miraculous cures.

To this end we feel we should apply the surgeon's knife; and we hereby announce that since it is your privilege to employ whomsoever you please to relieve your distress when you are ill, we also reserve the privilege of waiting upon you only in so far and for so long as you may accept our advice.

And we wish to advise those who are believers in and boosters for chiropractics, that from and after this date we shall expect you to call upon the chiropractor for ALL your ailments, or for none; and that hereafter when the chiropractor has a case that is going to die we will refuse to assume any responsibility in the case, and that we will not sign the death certificate for the chiropractor as has been done in the past.

We do not want your business, and shall most certainly be too busy to look after you.

MEMBERS WASHINGTON COUNTY MEDICAL SOCIETY.

This seems like adopting heroic measures, but it will win providing the members of the Washington County Medical Society observe the intention of the resolution in every particular. We confess that we have a sneaking suspicion that some weak-kneed or treacherous member of the medical profession in Washington county will fail to carry out the intention and purposes of the resolution, through fear of losing the friendship of some of his patrons, though more particularly through fear of losing a dollar or two. If a radical stand like that mentioned is justified, then it is worthy of being upheld, and as long as the medical men in Washington county have decided that their radical stand is justified, then it is up to them to uphold the stand and to make it decidedly uncomfortable for any of their members who become backsliders and who should be given to understand that it is better to lose a few dollars or even a few friends than to lose self-respect.

We shall watch these chiropractic fights with considerable interest, and for the reason that we have been trying to arouse the medical profession from a state of lethargy that has made it possible for every kind of medical quackery to thrive, even at the expense of the medical profession itself. In fact, notwithstanding all of our improved medical measures and our higher standards of medical education, the country today is afflicted with more quackery than ever before in its history, and the one and only reason that quackery thrives is because medical men have been "asleep at the switch" and have not heeded the warning that we and many others have long been trying to have recognized.

THE DIVISION OF FEES

The division of fees, or fee-splitting, is the buying and selling of patients. The practice exists in various forms, but the most usual form is as follows: A general practitioner makes a diagnosis in which surgical interference is indicated. He then refers the patient to a surgeon for operation. The surgeon operates, collects a fee and sends to the physician one-third or one-half of the fee, this last transaction being unknown to the patient. Sometimes the physician collects the fee "for the surgeon" and retains his percentage as agreed with the surgeon. Sometimes the fee is divided with the explanation to the patient that the physician "assists the surgeons" or gives the anesthetic. In many such instances the explanation is a subterfuge for fee-splitting. A competent surgeon usually has a regular assistant and an anesthetist with whom he is accustomed to work, and is more able in this way to do good work than if he permits each referring doctor to

assist him. Undoubtedly the physician should be paid for the study and diagnosis of a surgical case, but he should be paid directly for this service by the patient. In the same way the surgeon should be paid directly by the patient. The surgeon can frequently be of service to the physician and to the patient by explaining to the patient the value of the study and diagnosis made by the physician. But the accounts of the physician and of the surgeon should not be confused or rendered to the patient as a single statement. The evils of fee-splitting are, first, that it makes for incompetent surgery. The surgeon who is party to the practice gets his cases usually not upon the basis of merit, but upon the basis of the percentage of fees collected that he will give to the practitioners. The more incompetent he is, as a rule, the larger a percentage of the fees he gives to his co-fee-splitters. Second, fee-splitting makes for unnecessary surgical operations. Under the fee-splitting system surgery becomes a commercial enterprise and not a professional service. Both the physician and the surgeon tend to make surgical diagnoses without adequate study, and the result is unnecessary surgery. Much of the unnecessary surgery of our present day is due directly to fee-splitting. Third, fee splitting, by introducing dishonesty into medical practice, lowers the entire medical profession in the estimate of the public. The fee-splitter, for example, says to his patient that he refers him to a most competent surgeon, when he knows well enough that if he, the physician, were to be operated upon, he would select another surgeon. Further, the fee-splitter usually poses before his patient as having received little or no fee for his services when, as a matter of fact, he has received a large fee indirectly from the patient. He holds such a fee really as a theft. The great majority of physicians and surgeons are eager to put an end to all fee-splitting. They ask hospital trustees to help them in this matter by excluding fee-splitters from the privileges of practice in hospitals.—*Bulletin American College of Surgeons*, January, 1921.

DECEPTIVE CHIROPRACTIC ADVERTISING

The Indiana chiropractors took advantage of the opportunity offered to advertise themselves in connection with the Rubin case at Waukegan, Illinois, and as might be expected the advertising contained the most vicious lies that could be manufactured. The chiropractors unqualifiedly stated that the Rubin girl had a strange malady that medical specialists were unable to diagnose, that she was on the point of death when a chiropractor gave her a treatment which

produced almost instantaneous relief, and that within a few hours she was as healthy and happy as anyone.

The facts are that the Rubin girl had encephalitis, so diagnosed by her physicians. The period of excitement which had been a feature of the case was disappearing before a chiropractor saw the patient at his own request. The chiropractic treatments did not produce any change in the patient's condition, but made her so much worse that she begged to be relieved of the torment produced by the treatments. The several "adjustments" given by the chiropractor made the patient worse instead of better, and at the time that the chiropractors and the newspaper allies were announcing such a miraculous cure, the child was still in a precarious condition, though the disease was running about the same course as others of similar character.

The worst feature of the episode is that the public has been fed on a lot of falsehood and deception in connection with this Rubin case, and the public press has been a party to the fraud. We wonder when the time will come that the average newspaper editor will have a conscience, and a sense of honesty that will correct serious mistakes when he makes them. The chiropractors as a class are a lot of ignorant impostors who are deluding and defrauding the public. They are being aided at the present time by those newspapers that cater to sensationalism for profit. It is high time that decent and rational minded people take some measures to protect the public from not only the chicanery of medical quacks and pretenders, but the dishonesty of the public press.

REMEMBER HOW THEY VOTED

On the only vote on House Bill No. 267, the bill approved by the Indiana State Medical Association, on which a roll was called, the following showing is interesting. The vote was on a motion to strike out the enacting clause, which, of course, would have killed the bill. Those voting to strike out the enacting clause, as shown by the report of the roll-call, were:

Representatives:

William B. Anderson, Knox and Pike Cos.
Murray S. Barker, Boone Co.
R. U. Barker, Posey Co.
R. K. Bedgood, Tippecanoe and Warren Cos.
Sam Benz, Crawford and Washington Cos.
Clarence O. Buller, Madison Co.
W. M. Coapstick, Clinton Co.
David M. Curry, Sullivan Co.
Chester A. Davis, Jay Co.
J. I. Day, Lake Co.
James Delaplane, Carroll and Cass Cos.
Frank H. Duffendach, Dubois and Orange Cos.

C. Pralle Erni, Floyd Co.
James Filbert, Owen, Green and Sullivan Cos.
Geo. W. Freeman, Howard Co.
Thurman A. Gottschalk, Adams Co.
Sherman Hall, Jackson Co.
George W. Hansell, Pulaski and White Cos.
Robert B. Hougham, Johnson Co.
Jeptha Humphries, Shelby Co.
George H. James, Clay Co.
E. W. G. Johnson, Monroe and Brown Cos.
Henry W. Kamman, Vanderburg Co.
Charley Kares, Vanderburg Co.
Lawrence Leer, Elkhart Co.
Noble Malott, Lawrence Co.
Floyd D. Miller, Elkhart Co.
Ray C. Morgan, Henry Co.
Mrs. Julia D. Nelson, Delaware Co.
Jay J. Overmyer, Lake and Porter Cos.
Charles E. Richardson, Cass Co.
Nathaniel Ross, Allen Co.
John Shurmeier, Vanderburg and Warrick Cos.
Charles L. Tilden, Allen Co.
Claude A. Smith, Gibson Co.

The following list contains the names of those who loyally supported the Indiana State Medical Association and higher medical standards by voting against striking out the title; they shall be gratefully remembered by the medical profession and the public:

Representatives:

Henry Abrams, Marion Co.
Oscar A. Ahlgren, Lake Co.
John L. Benedict, Marion Co.
Otto Roy Beyler, St. Joseph Co.
Dr. Geo. W. Boner, Daviess and Martin Cos.
M. T. Calef, St. Joseph Co.
Albert B. Clapp, Clark Co.
J. P. Cronin, Wells and Blackford Cos.
Dr. O. A. Delong, Bartholomew Co.
Otto G. Fifield, Lake Co.
Theo. T. Gaesser, Perry and Spencer Cos.
Ray V. Gibbons, Madison and Tipton Cos.
Willis E. Gill, Putnam Co.
Clinton H. Givan, Marion Co.
John M. Grayson, Knox Co.
Wm. J. Hare, Decatur and Jennings Cos.
Charles W. Harlan, Kosciusko Co.
J. Glenn Harris, Lake Co.
Russell B. Harrison, Marion Co.
Paul T. Haworth, Marion Co.
John H. Hoffman, Noble Co.
Hugh B. Holman, Fulton and Miami Cos.
John T. Jameson, Marion Co.
Wm. R. Jinnett, Rush Co.
J. W. Johnston, Switzerland and Ripley Cos.
J. L. Kingsbury, Marion Co.
James M. Knapp, Wayne Co.
Oliver P. LaFuze, Wayne and Union Cos.
Richard Lowe, Montgomery Co.
John F. McClure, Madison Co.

Earl M. Mann, Vigo Co.
 J. D. Miltenberger, Delaware Co.
 Earl M. Myers, Fountain and Parke Cos.
 Frank J. Noll, Jr., Marion Co.
 Leo L. Osborn, Laporte and Starke Cos.
 Dr. William R. Phillips, Fayette and Franklin Cos.

Jacob D. Rich, Newton, Jasper and Benton Cos.

Harry E. Rowbottom, Vanderburg Co.
 E. W. Sherwood, Greene Co.

A. E. Shugart, Grant Co.

A. S. Sieg, Floyd and Harrison Cos.

George W. Sims, Vigo Co.

W. S. Tucker, Grant Co.

E. R. Waters, Tippecanoe Co.

H. C. Willis, DeKalb Co.

R. E. Willis, Lagrange and Steuben Cos.

John W. Winesburg, Wabash Co.

E. E. Youse, Huntington Co.

The members absent or not voting were Representatives:

George H. Cooper, Hancock Co.

Donald M. Coppock, Miami Co.

Thomas H. Cox, Marion Co.

E. P. Dailey, Allen and Whitley Cos.

B. F. Davis, Hendricks Co.

Charles E. Dean, Jefferson-Scott Co.

Chauncey W. Flesher, Vigo Co.

Wm. Hannberg, Dearborn and Ohio Cos.

John A. Hughes, Vermillion Co.

Henry L. Humrichouser, Marshall Co.

David B. Johnson, Morgan Co.

Oscar F. Lydy, Hamilton Co.

Omer U. Newman, Marion Co.

Donald C. Rulo, Allen Co.

G. Cal Shultz, Randolph Co.

EDITORIAL NOTES

ESPECIAL appreciation is due to Representative Kingsbury and to the three physicians who were members of the legislature, Drs. DeLong, Phillips and Boner, as well as to Representative Harrison and others who were sympathetic with the ideals and purposes of the medical profession.

THE United States Public Health Service has published, under date of February 11, 1921, a special article on epidemic encephalitis, commonly called "sleeping sickness," and those who are interested in the subject may obtain this article by writing the Treasury Department, Washington, D. C.

COMMITTEES from the staffs of St. Elizabeth and the Home Hospitals, Lafayette, have issued a call for the organization of a state hospital association, to be held in Lafayette April 27 and

28. Representatives from the staff of every hospital in the state are urged to be in attendance.

THIS is the time of the year when the doctors can be of service in recommending clothing to suit the varying changes of temperature. One day it is very warm and the next day it is very cold. These sudden changes in the atmosphere demand changes of clothing to correspond to the changes in temperature. It is just as harmful to have too much clothing as it is to have too little clothing.

THE protection of maternity in infancy is a laudable enterprise, but we do not believe that the federal government should take up the burden which only will add to the long list of paternalistic enterprises that the "uplifters" are foisting upon our already overtaxed Uncle Sam. Only confusion and chaos can result from such multiplicity of socialistic feature as are being foisted upon the federal government.

ONE of the members of the recent legislature, a mechanic, stated to a representative of the Indiana State Medical Association that before he left home to come to attend the session of the legislature he had been approached by a chiropractor who seriously advised him to give up his trade and become a chiropractor. He said he was told, "Why don't you take up chiropractic and make lots of money out of it? It is the greatest graft on earth."

DR. DAVID ROSS, President of the Indiana State Medical Association, made a fine impression on the Senate Committee on Public Health, in the hearing on the Senate bill proposing to create a separate chiropractic board with lower educational standards, when he emphasized the disastrous results that have followed the manipulation of the spine in certain tubercular cases and when he further emphasized the basic necessity of an understanding of pathology before attempting to treat disease.

THE State Medical Society of Wisconsin will celebrate its seventy-fifth birthday by holding a "Home-Coming" meeting in Milwaukee, September 7, 8 and 9, 1921. All former Wisconsin men, whether they have practiced there or left Wisconsin to study medicine, practicing elsewhere after graduating, are invited to this home-coming. The officers of the society are anxious to secure at this time, for mailing purposes, the names of all former Wisconsin men. They will confer a favor by sending their names and addresses to Dr. Rock Sleyster, Secretary, Wauwatosa, Wisconsin.

THE sponsors for the Michigan scheme to place the medical and surgical department of the Michigan University in competition with the regular medical profession of the state, seemed to have side-stepped the question when they heard from the rank and file of doctors throughout the state of Michigan. It remains to be seen whether the scheme, which is one of the finest trump cards that could be played by the advocates of state medicine, can be pulled off in Michigan, and the doctors in Michigan delivered hand-cuffed and gagged to the Medical Department of the Michigan University. Thank kind fortune the Medical Department of Indiana University has no such scheme of brigandage in view, and for that matter we believe that the dean and the medical faculty of our own state medical school are working for the betterment of the medical profession rather than to kill it.

YE gods! Now the chiropractors have a rival, and the disciples of the new cult are called sanipractors. We do not know the nature of this new form of swindle, in the cloak of the healing art, which seems to have been foisted upon the public first in the far West, but may be counted upon to reach the East, but suffice to say, we soon shall find the new cult knocking at the doors of our legislatures for recognition as a distinct school of medicine and its disciples worthy of legal recognition by licensure. Inasmuch as some of the ancients considered that most diseases arise from the stomach, we wonder why some enterprising chap has not started out to develop a school of bellypractors who attempt to extract disease by rubbing the abdomen while at the same time they skillfully extract dollars from the pocketbooks of the luckless victims. But how do the chiropractors feel since their toes are being trod upon? Will it not be another case of "freeze out" similar to the history of the osteopaths who are little heard of now?

THE hospitals and the medical profession of Indiana are under lasting obligations to Senator Harold Van Orman of Evansville, who made a forceful speech against House Bill No. 445 and stated that every hospital in Indiana would be demoralized in its discipline if this bill should be passed and that many of them would be closed. The proponents of this bill had the assurance to ask the legislature to pass a bill which would compel every hospital to allow any pay patient to select his own physician and to operate upon him whether qualified or otherwise, the only condition being that the physician called should be a licensed practitioner. The hospitals have been too often imposed upon already by those aspiring to do surgery and to

specialize in certain lines without adequate preparation or experience. The American College of Surgeons is wisely emphasizing the fact that only competent and experienced men should be permitted to do surgery in our general hospitals, especially those meeting the approval of the American College of Surgeons as standard hospitals.

WE voiced our criticism of President Wilson when he promoted his personal physician to a higher rank in the medical department of the Navy, and, for similar reasons, we criticize President Harding for promoting his personal physician to a higher rank in the Army. In the first place it is unfair and unjust to promote a man over the heads of many who perhaps are his superiors, and that sort of thing is very apt to demoralize the morale of our institutions. Our presidents should not be denied the right to select and retain their private medical advisors, and in view of the fact that the health and life of our President is of the utmost importance to the nation, we ought to furnish him every safeguard, even to the attention of his private medical advisor at the nation's expense. But to promote the President's personal physician to an Army or Navy position to which he is not entitled, and for which he may be ill-fitted, is the height of absurdity, and Congress should take means to prevent it by creating a position that carries with it merely personal medical attention and advice to the President.

THE Merchants Association of New York, through its Committee on Pollution and Sewerage, has started a vigorous anti-fly campaign for 1921. In literature sent out it states that the unusually mild winter presages a season that will be favorable to the development of the house fly, which is such an active agent in the spread of disease germs. The winter hang-over flies already have made their appearance in considerable numbers. The literature being sent out refers in particular to the Easter House Fly concerning which the following is offered:

The Easter House Fly is more deadly than other flies. It is the progenitor of many billion swarms. To kill just one Easter fly now means that there will be fewer billions to kill this summer. If you don't kill it now you are endangering the life of your babies and yourselves.

The danger threatened by the germs of the new fangled diseases that may be brought by the thousands of immigrants now coming to our shore is a menace that demands our greatest vigilance, and the fly can be depended on to see that a widespread distribution of the germs is made when they arrive. It is not inappropriate for physicians in Indiana to use their influence in this anti-fly campaign.

EVIDENTLY there is either friction or jealousy in the ranks of the promoters of the League for Medical Freedom for we now hear of another society known as the American Medical Liberty League with a few sponsors who formerly seemed to be ring leaders in the League for Medical Freedom. Evidently the cranks who are promoting the new society are able to command considerable money, for it costs something for postage and printing to send out the letters and circulars that now are going broadcast over the country. As usual with faddists and fanatics, distortion of facts and even downright dishonesty in promulgating lies, is offered as argument to bolster up what is termed medical liberty in opposing vaccination and the use of any kind of serums or vaccines. A sample of the rot that is being sent out is the statement that several scientific statisticians in this country and Europe have produced evidence which shows that not only is vaccination worthless but positively harmful, and that vaccinated persons are more likely to have small-pox. They also condemn anti-typhoid vaccination on similar grounds, and have the temerity to claim that the death rate from influenza can be directly traced to vaccination.

DR. W. N. WISHARD, Chairman of the Committee on Public Policy and Legislation of the Indiana State Medical Association, at the committee hearing on the Chiropractic Bill, called especial attention to the fact that chiropractors have but one single therapeutic resource which they attempt to apply to all cases they treat. He declared the benefit resulting from chiropractic to be chiefly due to suggestion, and illustrated suggestive therapeutics by the story of a lad who did not want to go to the seashore with his parents for a summer vacation because he had to travel on the cars to get there and such journeys invariably caused him to be "car-sick." On the day before his departure for the seashore, he was given a small dose of methylene-blue with the confident assurance that if it turned his urine blue within a few hours that he might be assured that he would have no car-sickness. The child came to his mother a few hours later with a perfectly radiant face and cried, "O, mother, it's blue, it's blue!" His mother reported to the doctor later that the child had had no car-sickness on the journey, and now though grown to young manhood, he has never had another attack. Dr. Wishard added that tactful suggestion was a therapeutic agent as old as the history of medicine, and that honestly and wisely applied, it was of great value, but that the legislature would hardly feel justified in establishing a special state medical board for the licensing of those who limited their practice

to the administration of methylene-blue or any other single therapeutic fad, suggestive or otherwise.

ACCORDING to *Northwest Medicine* we learn that the Washington Legislature has developed something new in lobbying. Instead of using persuasive arguments and convincing logic the drugless lobbyists (chiropractors and sanipractors) have adjusted the spines of most of the legislators. Boosters for one or the other schools of healing have steered legislators to rooms at the leading hotel, where deft spine mechanics have relieved so-called dislocations, subluxations and nerve impingements which were hitherto undetected and unsuspected by the "patients." The attractive feature of these treatments was that they were free. It did not matter that many who succumbed to the sales talks of the boosters were in perfect health before their spines were surveyed and straightened. They went amiably to the adjusting rooms under the belief that it might do some good anyway. Others, prompted by the talks of the chiropractic and sanipractic runners, discovered aches and pains of mysterious origin which were soothed away by the vigorous manipulation of their vertebrae.

We are surprised to think that the chiropractors did not think to adopt such a plan of action in order to impress the Indiana legislators with the value of spine adjustments. The Indiana chiropractors might have gone the Washington chiropractors one better by manipulating the spines of our legislators to the music of a jazz orchestra, and the entertainment might have been made still more attractive by serving tea and a light luncheon. Inasmuch as the chiropractors are great on advertising we really are surprised that they have overlooked some of these valuable stunts in promoting their interests before the Solons who have so recently returned to their homes from Indianapolis without giving official recognition to the chiropractic school.

ACCORDING to a general report, the Wisconsin doctors are having their troubles with the dreaming and impractical socialists who are making an attempt to qualify all christian scientists, naproaths, osteopaths, chiropractors and other pseudo medical cults, to sign death certificates, prescribe medicines, and have a representative on hospital and dispensary staffs. Already a bill has been introduced in the Wisconsin legislature to place christian scientists on an equal footing with surgeons in relation to the Workman's Compensation Act. Well, as we often have said, these conditions arise purely and alone as a result of the "holier than thou" attitude of medical men who feel so sufficient unto

themselves that they are above and beyond the practice of educating the public concerning the dangers and pitfalls of quackery in every phase of irrational medical thought, teaching and practice. As has been stated by the editor of the *Illinois Medical Journal*, March, 1921, "The growing enslavement of the medical profession has reached an acute stage. If the medical societies of the land, city, county, state and nation, were alert as they should be, and would exercise the influence that they really could, and if their officers were in general more alive to their responsibilities and exercised the power these organizations possess, a halt would soon be called to the everlasting meddling by politicians and derailed menopausics with the practice of medicine. Compulsory Health Insurance and similar schemes are sponsored and supported by the parasitic nonproducers, such as the cities are filled with, together with professional politicians, reformers for revenue, amateur reformers, derailed menopausics, social workers, trying to decide what is good for somebody else. It would be a blunder to place in the hands of the government the functions now efficiently handled by private citizens. Do not let us violate the laws of good government by placing in the hands of these impractical people matters that require sound judgment for their successful operation. State Medicine, the Nation Socialization of Medicine, the Practice of Medicine by State Universities, and Social Insurance all foster and bring about autocracy and bureaucracy, and destroy individualism. Autocracy, like monopoly, is bad for the country. Bureaucracy destroys industrial development. The lack of necessity to hustle is bad for the future of the country. Individualism is never so good and sound and healthy as when, like a chicken, it must do a certain amount of scratching for what it gets."

DEATHS

AMANDA RECORDS, widow of the late Dr. Samuel Records, died March 14 at the home of her daughter in Indianapolis, aged 78 years.

MARY LEATHERS CLEVINGER, wife of Dr. William F. Clevenger of Indianapolis, died March 17 following several months' illness.

E. F. BEARDSLEY, M.D., of Alexandria, died March 2, aged 60 years. Dr. Beardsley graduated from the Chicago Homeopathic Medical College in 1886.

CHARLES H. PARSONS, M.D., aged 66, died of paralysis on March 5 at his home at Rushville. Dr. Parsons graduated from the Bellevue Hospital Medical College of New York in 1878.

JOHN D. GREEN, M.D., Manilla, died February 26 following a stroke of paralysis. Dr. Green was 56 years of age, was born at Arlington, Indiana, and graduated in medicine from the Louisville Medical College, Louisville, Kentucky, in 1897. He was a member of the Rush County Medical Society and the Indiana State Medical Association.

ELMER T. SHERWOOD, M.D., Linton, died February 20, in Florida, where he had been spending the winter. Dr. Sherwood was 62 years of age. He graduated from the Missouri Medical College, St. Louis, Missouri, in 1882. At the time of his death he was secretary of the Green County Board of Health and was a member of the Green County Medical Society, the Indiana State Medical Association and the American Medical Association.

RUSSELL T. OLMSTEAD, M.D., of Versailles, died March 25, aged 70 years. Dr. Olmstead was born in Cincinnati, Ohio, and graduated in medicine from the Ohio Medical College in 1879. He had served on the Board of U. S. Pension Examiners for 16 years, as county health commissioner for 16 years, and, during the late war, was a member of the county board of examining surgeons and assistant food inspector for Ripley county. He was an active member of the Ripley County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES

DR. A. V. HINES of Auburn fractured his right wrist on March 8 while playing volley ball.

THE residence of Dr. C. W. Schwartz at Huntingburg was seriously damaged by fire recently.

DR. S. C. LORING of Plymouth suffered a stroke of apoplexy recently, but is making a satisfactory recovery.

DR. O. E. GLICK of Kentland has been appointed local surgeon for the Pennsylvania Railroad Company.

ACCORDING to announcements, construction will begin soon on the colored unit at the Irene Byron Tuberculosis Hospital, Fort Wayne.

DR. B. O. BURRESS of Alfordsville has been appointed County Health Commissioner, succeeding Dr. A. I. Donaldson, recently deceased.

ON January 19, 1921, a group of American physicians headed by Dr. S. M. Schmidt, sailed for Poland to aid in checking the epidemic of typhus in Poland.

DR. W. J. FERNALD of Frankfort has removed to his farm on Wild Creek, northwest of Frankfort. He will continue his practice at Frankfort as usual.

DR. G. W. H. KEMPER of Muncie, who has been spending the winter in California, is much improved in health and expects to return to Muncie about the middle of May.

A BOND issue for \$80,000 for the construction of the Blackford County Hospital has been approved and the Board of Trustees has submitted plans for the building to the Board of State Charities:

REAR-ADMIRAL E. R. STITT has been made Surgeon General of the Navy to succeed Rear-Admiral Braisted, retired, the appointment having been confirmed by President Harding and the Senate.

DR. GUY D. BAKER suffered extensive loss on March 2 when his office building at Crandall was destroyed by fire. The main business part of the village of Crandall was wiped out by fire on the above date.

DR. J. W. DICKERSON of Wingate, who has been a patient in the Methodist Hospital at Indianapolis for several months, was removed to his home on March 4. Dr. Dickerson is totally disabled from paralysis.

THE state of Ohio is waging a state wide campaign for complete birth registration. A number of physicians in various parts of the state have been prosecuted and convicted and the campaign is still being pushed vigorously.

REAR-ADMIRAL CAREY T. GRAYSON, who served President Wilson as personal physician during his term of office, has been ordered by the Navy Department to duty as officer in charge of the Naval Dispensary at Washington.

DR. JOHN F. BARNHILL of Indianapolis announces that he has associated himself with Drs. E. L. Lingeman and Byron Lingeman in the practice of laryngology and otology. Offices are located at 241 North Pennsylvania street, Indianapolis.

DR. A. M. SULLIVAN of Attica is leaving this month for New York, where he expects to spend some time in post-graduate work. He is taking his family with him, and probably will re-locate in some larger city after completing his post-graduate work.

THE Board of Directors of the National Tuberculosis Association met at the Claypool Hotel, Indianapolis, on March 11 to formulate plans for national anti-tuberculosis activities for the coming year. Notable public health workers from several states were in attendance.

THE Vanderburg County Medical Society was entertained by the staff of St. Mary's Hospital, Evansville, on March 7. Fifty physicians were present. Papers were read by Dr. Sidney J. Eichel and Robert W. Viehe. A luncheon was served by the Sister Superior and nurses of the hospital.

AT the annual meeting of the medical staff of St. Joseph Hospital, South Bend, Dr. Henry J. Graham was elected president; Dr. Leo P. Van Rie, vice-president, and Dr. J. B. Wiland, secretary. The reports for the year show that the hospital has treated 370 patients, which surpasses previous records.

THE Union Hospital of Terre Haute has received from Mr. and Mrs. Martin Sheets a fine old capacious residence with ample grounds located conveniently to the hospital, which is to be remodeled and known as the M. A. and S. C. Sheets Home for Nurses to be used by the Union Hospital Training School for Nurses.

THE United States Civil Service Commission announces competitive examination on July 1 for Associates in Clinical Psychiatry and Psychotherapy, the salary being \$2500 per year. Applicants should at once apply for Form 2118, stating the title of examination desired, to the Civil Service Commission, Washington, D. C.

MISS EDNA L. FOLEY of Chicago, president of the National Public Health Nursing Association and a director of the National Tuberculosis Association, addressed the Indianapolis Public Health Nursing Association at a luncheon on March 9 and on the same day spoke before the nursing staff of the Robert W. Long Hospital.

ON March 1, Drs. F. M. Hines, D. M. Hines, A. V. Hines and L. N. Geysinger became associated in the practice of medicine and surgery at Auburn. All of these physicians have been

practicing in Auburn for several years, the practices at this time being merged into group practice which seems to be gaining in popularity over the country.

THE 22d annual meeting of the American Proctologic Society is to be held in Boston, Massachusetts, June 3, 4 and 6, under the direction of Dr. Alois B. Graham, Indianapolis, president, and Ralph W. Jackson, M.D., Fall River, Massachusetts, secretary. The preliminary program just issued promises a very interesting session.

THE appropriation for the library of the Surgeon General's Office of the Army has been increased to \$15,000 in order that the work may be carried on with a reasonable degree of efficiency and desirable books purchased. This is the only library in the United States that acquires practically all the current medical literature of the world.

THE new hospital ship *Relief*, equipped with every modern device for safety, comfort and care of the sick and wounded, is now complete and ready to join the Atlantic fleet. This is the first ship to be built from the keel up for military hospital purposes, and however far from home port, it assures the same facilities for diagnosis and treatment accorded in the municipal hospitals of large American cities.

THE United States Civil Service Commission announces competitive examination on July 1 for medical internship in St. Elizabeth's Hospital, Washington, D. C., at \$1200 a year and maintenance. Other vacancies requiring similar qualifications also will be filled from this examination. Applicants should apply for Form 1312, stating the type of examination desired, to the Civil Service Commission, Washington, D. C.

S. M. PARKER has been added to the staff of the Indiana Tuberculosis Association as educational director, assuming his duties on March 1. His work will be among small societies which have no public health nurses and he will be available for all communities for lectures on health work, in organizing new associations, strengthening weak ones, and assisting in formulating programs for tuberculosis campaigns in the various counties.

DURING March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial

Remedies: Abbott Laboratories: Tablets Acriflavine-Abbott 0.46 Grain. Armour & Co.: Ampoules Pituitary Liquid-Armour 0.5 Cc. Hynson, Westcott & Dunning: Sterile Ampoules of Benzyl Benzoate-H. W. D. E. R. Squibb & Sons: Arsphenamine-Squibb, Neoarsphenamine-Squibb, Sodium Arsphenamine-Squibb.

THE *Medical Review of Reviews* announces that its June issue will be a special radium number dedicated to Mme. Curie, the discoverer of radium, who is to visit the United States this spring. The issue will contain special articles on radium written by the most prominent radiologists in the United States and Canada. Copies will be sent complimentary to every physician interested in the uses of radium and requests should be sent to the *Medical Review of Reviews*, 512 59th street, New York, N. Y.

A NOTICE from E. R. Stitt, Surgeon General of the United States Navy, states that there is at present a large number of vacancies in the medical corps of the Navy, and examinations are being held at frequent intervals in several of the coast cities in the United States both on the east coast and the west coast and at Chicago, Illinois. Circulars of information for persons desiring to enter the medical corps of the Navy may be obtained by addressing the Surgeon General U. S. Navy, Navy Department, Washington, D. C.

IN London, England, any person found to be harboring a rat or a mouse in his house is liable to a penalty of 5 pounds under a law recently enacted in Parliament. If the offense is continued he may be fined 20 pounds. Health measures demand the extermination of rats as they maintain an efficient transportation system for "black death" and other plagues and constitute a real hazard against lives and property. A recent bulletin from Washington makes the statement that it takes 200,000 men working full time to support the rat population in the United States.

TWENTY-FOUR graduates of the Indiana University School of Medicine have been appointed internes for the Indianapolis City Hospital for the ensuing year. They are Nicholas Joseph Eastman, Philip Bowser, Bert F. Ellis, Robert S. Millis, Joseph E. Killman, Stanley M. Casey, Ira Cole, Euclid T. Gaddy, Harvey L. Murdock, Orville Hamilton, Fred E. Gifford, Harry W. Garton, Edwin O. Alvis and C. V. Carter. Alternates are Donald Dryer, Verne L. Turley, John Oliver Eiler, Abe Cline, L. Forrest Swank, D. H. Eurit, Joseph D. Seybert, Orville M. Graves, Carl C. Reifeis, Wilbur F. Smith and S. L. Epple.

DR. WILLIAM C. BRAISTED, president of the American Medical Association, has been chosen as chairman of the committee to make arrangements for the establishment in Panama of an institution for the study of tropical medicine as a memorial to the late Major General William C. Gorgas and has just sailed for Panama to assume the responsibilities of this office. The purpose of the institution will be to promote biological research in fauna, flora, geology, soils and climate, with due reference to medicine, agriculture, forestry and fisheries and, in general, of scientific subjects that will promote the development of the American tropics.

LIEUTENANT-COLONEL HENRY SMITH of the Indian Medical Service is expected to arrive in the United States the latter part of this month to address several city, state and national medical societies at their conventions. Colonel Smith is best known as a cataract surgeon, but he is first a general surgeon and executive medical officer, having devoted over 30 years as such in the densely populated districts of Jullundur and Amritsar Punjab, India. He has been invited to address society meetings at Toronto, Chicago, Columbus, New York, Boston, Swamscot, St. Louis, Dallas, Denver, Tacoma, Seattle, San Francisco and elsewhere during months of May, June and July.

THE International Congress of Ophthalmology to be held under the auspices of the American Ophthalmological Society, the American Academy of Ophthalmology and Oto-Laryngology and fellows of the Section on Ophthalmology of the American Medical Association is a congress independent of and in no way affiliated with the International Congress of Ophthalmology which has convened from time to time in the past, the last session of which was to have taken place in St. Petersburg in 1914. The date for the present International Congress to be held at Washington, D. C., has been changed from April 18 to 21, 1922, as previously announced, to April 25 to 28, 1922.

THE Eleventh Councilor District Medical Association, composed of the counties of Carroll, Cass, Miami, Wabash, Grant and Huntington, will hold their annual meeting at Logansport, Thursday, May the 19th, 1921.

There will be an election of officers, paying of annual dues, clinics held, and papers read and discussed.

Dr. Lorin Smith of Wabash will read a paper on "New Ideas on the Treatment of Diphtheria."

Dr. W. A. Fankboner of Marion on "The Essential Elements of Nutrition."

Dr. W. F. Smith of Huntington on "Cesarean Section Versus High Forceps Delivery."

Dr. J. L. Gilbert of Logansport on "Immunology."

The business and scientific program will be followed by a banquet and other entertainment.

MAY 12 has been designated as the first National Hospital Day, and the eight thousand hospitals of the United States and Canada have been asked to cooperate. The movement has been started by Mathew O. Foley, Managing Editor of "Hospital Management", and the general direction for the observance of the day has been placed in the hands of the National Hospital Day Committee with headquarters at 537 South Dearborn street, Chicago. The stated purpose of this special day is "that the community may know its hospitals", and the following suggestions for the observance of the day have been given: General invitation to the public to inspect the institution. Distribution of literature telling of work and needs of the hospital. Graduation exercises of schools for nursing. Open house for high school girls and others interested in nursing. Inspection of Nurses' Home.

THE 48th semi-annual meeting of the Northern Tri-State Medical Association was held Tuesday, April 12, in the Academy of Medicine Building, Toledo, Ohio. The program included the following scientific subjects:

Symposium—"Lethargic Encephalitis," by C. D. Camp, M.D., Ann Arbor, L. A. Levison, M.D., Toledo, and L. A. Miller, Toledo; "Valuable Methods Used to Extend Operability in Advanced Cancer of the Cervix," by G. V. Brown, M.D., Detroit; "Intestinal Obstruction," by C. E. Boys, M.D., Kalamazoo; "Physiotherapy and Its Application to Modern Medicine," by W. W. Carey, M.D., Fort Wayne; "Syphilis—Recent Advances in Our Understanding of the Disease," by R. V. Hoffman, M.D., Director Scientific Research, U. S. Interdepartmental Social Hygiene Board, Washington, D. C.; "Tuberculosis and Pregnancy—A Study of Three Hundred Cases with Review of the Literature," by Stephen A. Douglass, M.D., Mansfield; "Pernicious Anemia and Its Treatment by Homohemotherapy," by B. M. Edlavitch, M.D., Fort Wayne; "The Diagnosis and Management of Small Renal or Ureteral Calculi," by Hugh Cabot, M.D., Ann Arbor.

BILLS affecting medical profession introduced in the Indiana Legislature:

HOUSE

- H. B. 20 (KAMMAN)—Providing for registration of nurses, lowering standard and placing control of board in hands of physicians. Indefinitely postponed.
- H. B. 69 (WILLIS, H.)—All time health officer bill. Sent to engrossment but not handed down by speaker for vote on last call.
- H. B. 140 (HARRISON)—Registration of nurses bill drawn by nurses but amended as compromise with Kamman bill. Passed both houses and signed by governor.
- H. B. 147 (GAESSER)—Permitting dealers in general merchandise to dispense drugs where community is without registered pharmacist. Indefinitely postponed.
- H. B. 234 (ROSS)—Defining chiropractic, legalizing practice and exempting it from provisions of all present health laws. Enacting clause stricken out on second reading.
- H. B. 267 (KINGSBURY)—Medical association measure providing for annual registration of every licensed physician and strengthening present law in other particulars. Passed second reading and engrossed but not handed down by speaker because of jam of other bills near close of session.
- H. B. 301 (SHULTZ)—Anti-vivisection bill. Indefinitely postponed.
- H. B. 311 (JAMES)—Freak bill requiring every physician to give \$5,000 bond and to notify relatives before operating on patient. Indefinitely postponed.
- H. B. 346 (ROSS)—Providing for city sanitation officers who shall not be physicians. Indefinitely postponed.
- H. B. 445 (CURRY)—Denying hospitals right of judging fitness of physician to use hospital facilities and compelling them to admit any licensed physician whom patient might select whether competency approved by hospital or not. This bill would have demoralized the service and destroyed discipline in every hospital in the state and would have closed quite a few of them. It was indefinitely postponed in the Senate.

SENATE

- S. B. 83 (MAIER)—Regulating the sale of certain poisons. Never reported out of committee on public health.
- S. B. 120 (MAIER)—Authorizing state board of health to test consumption cures. Passed Senate but killed in House.
- S. B. 148 (MEEKER)—Providing for separate board of chiropractic examiners, defining its powers and duties. Never reported out of committee on public health.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	83
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	12
4.	Carroll	Eva N. Kennedy	20	22
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	24
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	26
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	10
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	24
15.	Washington	Irvin Huckleberry	5	8

MUNCIE ACADEMY OF MEDICINE

January 28, 1921

PAPER:—"Operative Treatment of Goitre":—DR. C. MELVIN MIX.

Abstract: In order to facilitate the study of cases of goitre suitable for operation, the correlation must be established between the clinical symptoms, results of metabolic studies, and the pathology present.

Much experimental and noteworthy work has been done in the last few years concerning goitre. Kendall and his associates have isolated and carefully studied the iodine-containing hormone thyroxin. Plummer's work on the basic metabolic rate has been of much value to the surgeon in helping to classify fit and unfit subjects for goitre operations.

Not all goitres cause enlargements of the thyroid gland and not all enlargements of this gland are goitres, as the enlargement may be due to carcinoma (not rare), rarely tuberculosis and syphilis.

Pathologically goitres are usually classified as colloid or parenchymatous; a convenient clinical classification is, (1) simple hyperplastic, (2) toxic, (3) cystic and (4) exophthalmic or Graves' disease.

The simple hyperplastic variety is more common to second and third decade and comprises the "swelled" neck of young girls. This type is the precursor of most goitres. They are probably due to some focus of infection and with the removal of the infection the goitre usually disappears, especially if augmented by judicious treatment with iodine internally or externally. If much care and caution are not observed, this simple, inoffensive type of goitre may be excited into troublesome activity by ill-advised iodine treatment. Immediate surgery directed toward thyroid gland is not indicated in this simple hyperplastic type.

The toxic type includes the foetal adenoma. The enlargement is not uniform; toxic symptoms are present, such as tachycardia, nervousness, tremor and early exhaustion; patients perspire easily and present vasomotor disturbances of the skin. This type is operated successfully and safely by complete thyroidectomy and usually stay well.

The cystic goitres are more prevalent in middle life and present no toxic symptoms. The enlargement is not uniform, but nodular. Also in this group are substernal or plunging goitres. If pressure symptoms are present radical operation is demanded. Colloid and cystic goitres are surgical.

The exophthalmic type of goitre requires especially good surgical judgment. In a mild case a primary thyroidectomy may be performed. If the symptoms are moderate, no cardiac degeneration and no extreme emaciation present, the patient is put to bed in the hospital for a week or ten days and when the pulse and temperature become approximately normal and patient is sleeping and eating well, he is a fit subject for thyroidectomy. In the very extreme cases it is not advisable to operate, even though they

have been at absolute rest for some time. X-ray or radium should be used. If they improve sufficiently, a polar ligation of superior thyroid artery should be done under local and nitrous oxide-gas oxygen anesthesia. One pole should be done at a sitting. After ten days, another ligation may be done. Three months to a year later, a thyroidectomy should follow. It is oftentimes true, however, that the patient imagines himself well and will not return at the specified time, but will present himself later, when his symptoms have recurred and he is no longer a fit subject for operation.

The dangers of thyroidectomy are those which are inherent in the condition of the patient which we have discussed above; in addition, there is shock and hemorrhage from the operation itself, injury to the parathyroids and the recurrent laryngeal nerves, and secondary hemorrhage. Injury to the parathyroids and the recurrent nerves can be guarded against by leaving the posterior portion of the gland in its bed, a procedure advised and carried out by Kocher many years ago. Care and good technique would obviate the other dangers. A recent safeguard practiced by Dr. Crile is to abandon the operation in case patient's condition becomes critical on the table, and finish after a few days of rest when the patient's condition has improved. By observing all these various precautions the operative mortality rate of exophthalmic goitre has been reduced to the normal operative mortality rate of two and one-half percent, and in the hands of a few operators it has been reduced to a fraction of one percent.

In surgery we have the surest method of permanent cure of goitre. A carefully worked out plan of treatment, based on careful study of the general condition, clinical symptoms, and basic metabolic rate of the patient is necessary for success in the field of surgery. In no other group of cases is surgical engineering more necessary. Confidence of the patient in the surgeon and his associates is highly essential. In no other class of surgical cases are the results of careful, painstaking work more amply rewarded.

R. H. BEESON, Secretary.

DELAWARE-BLACKFORD

IN MEMORIAM

DR. OWEN WALTER OWENS—February 5, 1921

A comrade and co-worker in our ranks has fallen in the fullness of his life and labors. His was a busy life, devoted to service and sacrifice. It has been given to few men to crowd into the years of professional service such a large volume of work. Though but twenty years a resident of Muncie, he had attained an obstetrical record, in number of cases, equaled by few general physicians in the state. This may be taken as a fair index of the number of homes he served in the capacity of family physician. He was a tireless worker. The call to duty never found him lagging. Through all kinds of weather, night or day, he spared not himself in his ever ready response to the appeal of suffering. His last conscious moments were at the bedside of a patient.

Whether we may all agree as to the wisdom, duty or prudence of a physician making the supreme sacrifice by laying his all upon the altar of humanity, is a matter for the individual conscience, judgment and discretion, but we all must admire such devotion to a cause to which he has consecrated his life.

Therefore, be it

RESOLVED, by the Delaware-Blackford County Medical Society, that in the death of Dr. O. W. Owens, the Society has suffered the loss of a worthy member who exemplified in his life and character the best traditions of the profession. In manner he was ever

modest, and in contact with others he was always kindly and courteous. He was in truth a gentleman.

And be it further

RESOLVED, That to the members of his household, to the stricken hearts of that broken family circle—the widowed wife and sons—our hearts are deeply touched and our sympathies go out to them in their great sorrow and bereavement. We commend them to the "solemn pride that must be theirs" in the fact that he gave his life in the service of humanity—the noblest cause to which any life can be dedicated.

RESOLVED, That this expression be delivered to his family and be made a permanent record in the transactions of this society.

W. W. WADSWORTH,
A. A. CECIL,
S. G. JUMP,
Committee.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ACRIFLAVINE-HEYL.—A brand of acriflavine (see New and Nonofficial Remedies, 1921, p. 22). Heyl Laboratories, New York.

PROFLAVINE-HEYL.—A brand of proflavine (see New and Nonofficial Remedies, 1921, p. 23). Heyl Laboratories, New York.

CALCIUM CACODYLATE-IPCO.—A brand of calcium cacodylate (see New and Nonofficial Remedies, 1921, p. 50). Intra Products Co., Denver, Colo.

DUBOIS IODOLEINE, INJECTABLE, AMPOULES, 2 Cc.—Each ampoule contains 2 Cc. of DuBois iodoleine (see New and Nonofficial Remedies, 1921; p. 153). David B. Levy, New York.

TINCTURE OF DIGITALIS FAT-FREE-SQUIBB.—A biologically standardized fat-free tincture of digitalis corresponding in drug strength to the U. S. P. tincture of digitalis. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, March 5, 1921, p. 655).

SOLUTION ARSPHENAMINE-LOWY 1 PERCENT.—An aqueous 1 percent solution of arspenamine, possessing the proper degree of alkalinity. The solution is supplied in ampoules containing 40 Cc. (0.4 Gm. arspenamine) and 60 Cc. (0.6 Gm. arspenamine). These ampoules should not be used after the date stamped on the label of each package or if the degree of coloration of the solution is greater than that of a control tube which accompanies the package. A sterile needle for intravenous injection and sterile rubber tubing accompanies each ampoule. The Lowy Laboratory, Inc., Newark, N. J.

AMPOULES PITUITARY LIQUID-ARMOUR 0.5 Cc.—Each ampoule contains 0.5 Cc. pituitary Liquid-Armour (see New and Nonofficial Remedies, 1921, p. 222). Armour & Co., Chicago, Ill.

TABLETS ACRIFLAVINE-ABBOTT 0.03 GM.—Each tablet contains 0.03 Gm. acriflavine-Abbott (see New and Nonofficial Remedies, 1921, p. 21; (*Jour. A. M. A.*, March 26, 1921, p. 859).

PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: White's Wonder Worker (W. W. W. Medicine Co.), falsely represented as an effective remedy for malaria, rheumatism, syphilis, all kidney and liver complaints, female disease and a number of other things. Kar-Ru and Gon-Nol (Kar-Ru Chemical Co.), the first falsely represented as an effective remedy for rheumatism, kidney, liver, bladder and stomach troubles, mental and physical debility, blood diseases and irregular menstruating; the

(Continued on advertising page XVIII)

Pituitary Liquid

is the perfect preparation of Posterior Pituitary active principle. It, too, is without preservatives— $\frac{1}{2}$ c. e. obstetrical, 1 c. e. surgical.

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is true substance and will give results. Powder 2 and 5 gr. capsules and 2 and 5 gr. tablets.

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Plain and chromic, regular (60 inch) emergency (20 inch) Iodized (60 inch)

Strong and sterile.



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The Suprarenalin preparations are now available.

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Suprarenalin Solution, 1:1000.....1 oz. bottles
Suprarenalin Ointment, 1:1000.....tubes

Suprarenalin designates the astringent, hemostatic and pressor principle of the Suprarenal Gland as isolated by the Armour chemists.

Suprarenalin Solution is the incomparable preparation of the kind. It is water-white, stable and non-irritating and is entirely free from chemical preservatives.

Suprarenalin ointment is bland and its effects very lasting.

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(Continued from Page 138)

second fraudulently represented as an effective remedy for gonorrhea. O-Zo-Nol (Ozouol Chemical Co.), falsely represented as an effective cure for eczema and all eruptions and diseases of the skin, nasal catarrh, sore throat, erysipelas, croup, piles and ear-ache. G. S. Remedy, falsely represented as an effective remedy for pellagra, rheumatism, indigestion, malaria, stomach, liver, kidney and bladder diseases and syphilis. - Gon-Nor (Occidental Medicine Co.), falsely represented as an effective astringent in acute and chronic gonorrhea, urethritis, etc. Methyloids (Frederick Stearns & Co.), falsely represented as a successful treatment for gonorrhea and its complications. B-I-F Combination and B-I-F Capsules (Hollander-Koshland Co.), both represented as an effective remedy for gonorrhea, gleet and disorders of a similar nature and origin. Brsco (Brsco Medicine Co.), falsely represented as a treatment for tuberculosis, bronchitis, Spanish influenza, hay fever, asthma and ordinary coughs and colds. Sulpho-Saline Still Natural Mineral Water (Excelsior Springs Mineral Water & Bottling Co.), falsely represented as an effective cure for stomach troubles, headaches, jaundice and vertigo. (*Jour. A. M. A.*, March 5, 1921, p. 671).

MORE MISBRANDED VENEREAL NOSTRUMS.—The following preparations, sold for the treatment of venereal diseases, have been the subject of prosecution by the federal authorities, chiefly because the therapeutic claims were held to be false and fraudulent: Orion Pearls S. and C. Compound (American Drug-gists' Syndicate), capsules containing essentially a mixture of oils and resins, including cinnamon, santal, copaiba and probably buchu and sulphurated fixed oil. Antiseptic Powder (Henry S. Wampole & Co.), consisting essentially of boric acid and alum with traces of volatile substances including methyl salicylate and indications of menthol. Depurativo D. C. (R. A. Delgado Carbonell), consisting essentially of potassium iodid, unidentified plant extrac-tives, alcohol and water. Gonocol (National Drug Co.), essentially a watery solution of zinc sulphate, hamamelis water and a small amount of alcohol, with 0.38 grain iodine and 0.36 grain protein to each fluid ounce.

Bouchard Pills (Martin Rudy), consisting essentially of iron sulphate and resins, with a small amount of oil of cubebs. Some injection tablets in the same package consisted essentially of zinc sulphate and potassium permanganate. Perlas Urinales-Antisepticas (G. J. Fajardo), containing methylene blue, cubebs and nutmeg. Metilol (Logan Pharmacal Co.), tablets consisting essentially of hexamethylenamin, nutmeg and cubebs. Montauk Santal Comp. (G. J. Fajardo), capsules containing oils, including sandalwood oil. (*Jour. A. M. A.*, March 12, 1921, p. 743).

WOODS' TOBACCO HABIT CURE.—On February 24, 1921, the Postmaster General issued a fraud order against Edward J. Woods, Inc., exploiters of drink and tobacco habit cures. Woods' cure for the tobacco habit was analyzed in the A. M. A. Chemical Laboratory some years ago and it was found that among the tablets that constituted the treatment there were some of asafetida and methylene blue. The purchaser was told that one of the signs of a cure was that of offensive-smelling perspiration and a strong odor from bowel excrement, while the "greenish color" of the urine was "proof positive" that the tobacco poisons were being eliminated through the kidneys. The government's case dealt only with this alleged cure for the tobacco habit, but, as the fraud order has

been issued against Edward J. Woods, Inc., it will have the effect of putting the Woods' "drink cure" out of business also. It was also brought out that the directions now being sent out with the treatment now contain no admonition to watch for favorable signs, but the ingredients which manufacture those signs were still retained in the treatment. (*Jour. A. M. A.*, March 19, 1921, p. 811).

MODIFIED SALICYLIC ACID AND SAMARIN.—In general the pharmaceuticals of Frank S. Betz Co., Hammond, Ind., are non-secret in composition. However, Modified Salicylic Acid and Samarin are described in the Betz catalogue without information concerning their composition. In view of this and because the claims made for them seemed questionable, the A. M. A. Chemical Laboratory analyzed these preparations. Both of these preparations are marketed in the form of tablets. Each tablet of Modified Salicylic Acid was found to contain approximately 4.8 grains acetyl-salicylic acid and about 0.5 grain each of gypsum and starch, with a trace of talc. Each Samarin tablet was found to contain about 2 grains acetanilid and nearly 1.5 grain salicylic acid, probably in the form of calcium salicylate. The tablets were uncoated and colored green throughout, and the acetanilid was not declared on the label as is required by law. (*Jour. A. M. A.*, March 26, 1921, p. 883).

MANGANESE.—Investigation of Reiman and Minot demonstrate that ores containing manganese as oxides and silicates are soluble in gastric juice; that manganese is absorbed in the blood stream and again eliminated quickly; and that even prolonged feeding of large amount of manganese ore to dogs failed to produce significant changes in the manganese content of the blood and tissues or to cause any pathologic symptoms. (*Jour. A. M. A.*, March 26, 1921, p. 867).

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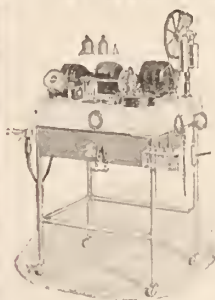
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ORIGINAL ARTICLES

PELVIC LYMPHANGITIS*

CARL HABICH, M.D.
INDIANAPOLIS, INDIANA

In recent years the investigation of the role played by the lymphatics in the extension of those infections which heretofore have been attributed to "extension by continuity" has reached such an important place that we can no longer ignore the fact that this part of the circulatory system has been neglected. In a recent issue of the *Journal of the American Medical Association* the following appeared in an editorial under the heading, "The Role of Lymphatics in Pneumonic Infections of the Lungs":

" . . . the submucosa of the trachea and bronchi has been demonstrated by the New Haven investigators to furnish a pathway of infection to the lung. It contains a rich plexus of lymphatics prominent everywhere and devoid of valves. There is a continuity throughout this lymphatic system so that the bacteria which once find their way into it can easily spread. Although it thus affords a direct pathway of infection to the lung, Winternitz and his colleagues allege that it may also serve as a protective mechanism against pulmonary infection, for the drainage of the submucosa of the trachea and bronchi is largely diverted as the lung is approached to the protective regional lymph nodes.

"The spread of infection through lymphatic channels is probably more common than has been appreciated by most clinicians. The investigations of recent years have shown that progressive pyelonephritis is by no means always, if indeed it is commonly, dependent on direct transference of the micro-organism backward along the urinary channels from the distal parts of the latter first invaded. The little recognized lymphatics of the urinary organs may serve in this case as the paths of bacterial advance independent of the urine in the ureters."

Deaver believes that chronic pancreatitis is the result of a progressive lymphangitis and not

the result of infection which has ascended by continuity through the pancreatic duct from the duodenum or gall bladder. In viewing the results of infection in the female pelvis and in clinging to the accepted ideas of the extension of these infections, we are confronted with a series of phenomena which have thus far remained unexplained.

Chronic endocervicitis presents the most frequently encountered objective pathology of the whole gynecological system, and appearing as it does at the gateway of the pelvis remains to threaten the comfort and even the life of the unfortunate patient. It is a definite clinical entity and has its incidence from early childhood or even infancy until well into the post-climacteric period. Sturmdorf has very aptly referred to the cervix as the tonsil of the uterus, as it serves when infected as a permanent focus of serious potentialities. Indeed, the mere mention of chronic endocervicitis should call to our minds the picture of all pelvic pathology of infectious nature, which has been of slow development and of obscure origin.

Above and below the internal os of the uterus we have a very striking physiological, anatomical and pathological contrast. Functionally, the cervical canal acts merely as a passive passageway between the vaginal vault and the uterine cavity, and it plays no part in the menstrual cycle. The cervical mucosa, containing as it does the racemose glands of Naboth, a columnar lining, and subject as it is to frequent lacerations, is highly susceptible to infection. On the other hand, excluding those acute cases which follow labor, abortion or instrumentation, and although subject to the hyperemic changes of menstruation, we find that chronic infection of the corporeal endometrium is exceedingly rare. We are taught that, in spite of the fact that the infecting organisms travel over the surface of the lining membrane of the body of the uterus in order to reach the fallopian tubes and their surrounding structures, the endometrium itself is seldom involved.

Granting that the gonococcus is the most frequently offending organism in the female pelvis we find that Graves of Harvard, in his text

*Presented before the Surgical Section of the Indiana State Medical Association at the South Bend session, September, 1920.

book says, "The endometrium seems to be peculiarly immune to what may be called a permanent infection of gonorrhea." Also, Arthur H. Curtis, after the careful and scientific investigation of one hundred and eighteen cases, records the following conclusion: "Chronic endometritis, *per se*, with bacteria present in smears and cultures, is practically to be ruled out as a definite clinical entity." Howard Kelly of Johns Hopkins says, "Out of eighteen hundred cases occurring in my own service and analyzed by Dr. T. S. Cullen, endometritis showing definite inflammatory changes, exclusive of tuberculosis, was found only forty-nine times. The mucosa of the uterus was studied in every case when that organ had been removed or when scrapings had been taken, including many cases of myomata and of pus tubes. We found that even where there was a pyosalpinx on one or both sides, that the uterine mucosa was often perfectly normal." Quoting further, "It is safe to say that ninety-nine out of one hundred cases where the physician cures the uterus for endometritis, and removes more or less endometrium, no real endometritis in the sense of a chronic inflammatory affection is present."

In a paper read before the Section on Obstetrics, Gynecology and Abdominal Surgery at the seventy-first annual session of the American Medical Association, at New Orleans in April, 1920, William J. Mayo made the following statement: "The endometrium is relatively seldom diseased, and a high percentage of menstrual disturbances are ovarian and tubal in origin."

The later literature abounds in the reports of many different scientific investigations by many different workers, which show that the actual existence of chronic, infected, inflammatory endometritis is at least exceedingly rare, and that those conditions which are so extensively described in practically all of our text books as different varieties of inflammatory endometria are merely the normal, histological changes incident to the periodical menstrual metamorphosis, which simulate an inflammatory process in its different stages, and that when bacteria are found above the internal os we may look for a leaking tube. Norris says, "Prior to the researches of Adler and Hirschmann, which were subsequently confirmed by the work of Keene and the author, as well as by other observers, many of the physiological changes incident to the normal menstrual cycle were viewed as pathogenic, and, as a result endometritis was frequently diagnosed when no inflammatory change of any sort existed. Furthermore, the classification of endometritis was greatly complicated by such qualifying terms as glandular, interstitial, polypoid, fungoid, etc., which were in many instances at least, merely phases of the menstrual cycle. Thus if the endometrium to

be examined has been removed a few days prior to menstruation, the glands would naturally be large and prominent, and a glandular endometritis would be diagnosed, whereas, if the tissue chances to be examined in the post menstrual period, it was often thought to be the seat of an interstitial inflammation."

Barbour and Watson say that the frequently described and rarely encountered so-called hyperplastic glandular endometritis is "more of the nature of a new growth. It is really a simple adenoma" or rather an adenomatous overgrowth analagous to that found in the thyroid gland in Graves' disease, and is never inflammatory in character.

The end result of an infected cervix is frequently infection of the adnexal tissues, and we will consider those cases of pyosalpinx, sactosalpinx, hydrosalpinx, etc., in which there have been no history of labor, abortion or instrumentation. This type of case is common, and usually the result of gonorrheal infection of the cervix, the gonococcus, according to Menge, being found in the cervix in ninety-five percent of the chronic gonorrhea cases in the female. So our observation of the pathology of the pelvis reveals that very frequently we have the following condition, of below, a chronically infected cervix, above, chronically infected adnexa, but between these two a bacteria free endometrium.

Now if this is true, and if it is also true that the invading organism travels by continuity over the surface of the endometrium, it is difficult to understand why this lining membrane of the body of the uterus so successfully resists infection, especially with the knowledge that ordinarily columnar epithelium is peculiarly susceptible to invasion by the gonococcus, and that the open mouths of the utricular glands would seem to invite infection. It is in an attempt to correlate these facts and to find a satisfactory explanation for this apparent immunity of the endometrium that some of the literature has been searched.

The opinions encountered and the conclusions observed seem to be limited only by the amount of literature investigated. We can readily understand the comparative immunity of the vaginal mucosa, with its stratified squamous epithelium, its absence of glands and its freedom of hair follicles, offering, as it does, a mechanical rather than a biological defense, and we have no difficulty in realizing the unusual vulnerability of the cervix, with its columnar epithelium, its racemose glands and its lacerations, but we find many and variable explanations concerning the immunity of the corporeal endometrium.

Graves takes cognizance of this immunity by the following statement: "The endometrium seems to be peculiarly immune to what may be called a permanent infection of gonorrhea. It

must be that during the process of ascending from the endocervix to the tubes, the gonococcus resides actively on the mucous membrane of the endometrium for a time, but that a true gonorrheal endometritis is rarely seen. The conclusion is that the endometrium serves as an efficient bridge for the passage of the gonococcus to the tubes, but that it is not a congenital soil for the organism to make a permanent abiding place. This fact is shown in the microscopic examination of uteri removed for adnexal disease in which the endometrium presents no signs of active inflammations."

In other words, the statement is made that the endometrium is not a fertile soil for the invading organism, but no attempt is made to explain why this is true. Howard Kelly, in acknowledging this fact, offers an explanation which is accepted by many. He says, "This exemption seems undoubtedly due to the fact that the uterus is so easily drained that the infectious material is not retained long enough to provoke and maintain an active inflammation. In examining many specimens of endometritis it is rare to find signs of true inflammation, or even evidence of any organism deep down in the glands or the sub-mucous tissue."

If we grant that the draining propensities of the uterus is the correct explanation of this phenomenon we must not forget that the cervical mucosa, although frequently infected even in the absence of lacerations, possesses equally good drainage. Also, it would seem that, as the gonococcus has no motion of its own, and we are to believe that it is retained long enough to travel from the internal os to the entrance to the tubes, surely it would be in contact with the mucosa of the endometrium long enough to provoke some inflammatory change.

The idea is advanced that this immunity is due to the periodical monthly shedding of the decidua, but if this is true in the period of time which elapses between the menstrual cycles the bacteria would have ample time to invade the tissues.

It would be possible to continue almost indefinitely to enumerate the different ideas and theories found in the literature which attempt to explain why the endometrium is so seldom infected, but I desire to present to you some thoughts, the result of the work of Dr. Arnold Sturmdorff of New York, which may at least help to solve this apparent phenomenon and some of its sequelæ.

The fact that true infected, inflammatory endometritis is rare pathology leaves unexplained many of the cases of amenorrhea, menorrhagia,

metrorrhagia and dysmenorrhea which we have heretofore attributed to endometritis, and it is now rather generally conceded that these symptoms are functional, the result of endocrine distortion. When we believe that chronic, slowly developing pathology of the pelvis, without history of labor, abortion or instrumentation, such as chronic broad ligament abscess, pyosalpinx, hydrosalpinx, tubo-ovarian abscess, etc., have insidiously developed from infected cervixes by continuity over the surface of the endometrium, we are reaching a conclusion for which we have no definite, tangible proof.

In recalling some of the anatomy and physiology of the uterus and its appendages we find that the musculature is subject to rather regular rhythmic contractions, exclusive of the normal contractions of labor and of menstruation. All musculature, whether it contains voluntary, involuntary or a mixed variety of fibres, must necessarily do a certain amount of work to prevent its degeneration. The uterus has the added function of preserving drainage and of controlling its blood supply, as the uterine veins are valveless and this organ normally requires a wide range of circulatory change. Also, the uterus contains a very extensive lymphatic distribution. According to Leopold, this circulation has its origin in the cervical mucosa and the endometrium. Here after arising from the lacunæ of the mucosa it travels through minute ostia into the muscular substance of the uterus, and branching into a capillary network penetrates the delicate sheath of connective tissue which surrounds each fasciculus of muscular fibre. So every fascicle and every muscular bundle of the uterus is surrounded by this very extensive system of lymphatics, which travel up to the subperitoneal surface into the collecting channels, and these course parallel to the uterine and ovarian vessels. There is no definite line of demarkation between the lymphatics of the cervix and those of the body of the uterus, the small capillaries of each anastomosing with those of the other.

This is the course which infections of the cervix take in their extension, following the lymphatic system, as infections in other parts of the human anatomy are prone to do. It is an ascending lymphangitis which results and not an extension by continuity by way of the endometrium. The endometrium is not particularly immune to infection, in itself, but being a highly specialized tissue, is merely, according to the natural law, well protected. The time limit of this paper precludes the possibility of entering into a discussion of the pathological hyperplastic changes which have been found in the lymphatics involved.

According to Sturmdorf, we find this ascending lymphangitis "occasionally establishing military myometrical abscesses of the uterine musculature, or continuing to the peri-adnexal lymphatics, causing a kinking of the tubes, or perhaps an agglutination of their ostia, even at times attacking the tunica albuginea of the ovaries, thickening their capsular tunic and interfering with their normal function." This is the method by which this slowly developing pathology arises from the endocervical infections and this is the process which furnishes the etiology of those cases of amenorrhea, menorrhagia, metrorrhagia and dysmenorrhea, which have in the past been attributed to chronic endometritis. It is not difficult to understand that, the normal uterine contractions being interrupted, there would be a resulting stasis by reason of the interference of the normal circulatory control, and as a consequence, a prolongation of the menstrual cycle, or perhaps an excessive flow. And equally true, working on the theory of an ovarian hormone control of the periodical monthly bleeding of the endometrium, and also a like control of the incoagulability of the menstrual blood, the thickened tunica albuginea "may impede the maturation and rupture of a graafian follicle with consequent inhibition of menstruation (amenorrhea), or retarding its subsequent contraction and involution protract the menstrual flow (metrorrhagia). The dysmenorrhea resulting from endocervicitis may be explained by the fact that "the myometrical sensory nerve filaments penetrate the muscle sheaths and hence the normal uterine contractions, intensified during the menstrual cycle, compress the infiltrated perimyoeal areas and become painful. It is a marked characteristic of the dysmenorrhea resulting from endocervicitis that it subsides after the inauguration of a full flow."

The severity of this type of pelvic infections, which do not include those following labor, abortion or instrumentation, depends entirely upon the amount of cervical invasion, the virulence of the infection and the resisting qualities of the patient, and the functional changes in menstruation have a direct relationship to the amount of ovarian involvement. Recognizing chronic endocervicitis as a primary focus of infection and its extension as an ascending lymphangitis, places it, in accord with our modern conception of bacterial invasion, upon a rational parallel with any other infectious process.

If further investigation of this subject would prove, as it has in other parts of the body, that the extension of infection from the cervix is by way of the lymphatics, it would be a happy solution of some of the unexplained phenomena of pelvic infections and the associated menstrual disturbances.

DISCUSSION

DR. WALTER H. BAKER (South Bend): This is a very worthy and scientific paper. It deserves a great deal of thought, investigation and discussion, and is surely a step forward and in the right direction in the study of pelvic infections. If our thought and reasoning are not correct our treatment is apt to be wrong, and in the past our treatment as a whole has not been right. This thought should lead us to new treatment.

With the exception of the gonococcus it is generally accepted that infection enters the pelvis from the cervical mucosa by the blood stream or lymphatics. The gonococcus has the reputation of entering the pelvis by direct extension over the endometrium and mucous membrane of the tubes, although it is not conceded that it does not also go by the lymphatic and blood vessel route. The endometrium does not infect easily, as has been shown by this paper, and as we found in making cultures from the endometrium about a year ago when by the most painstaking methods we could not get a culture unless some irritation from pressure, tumor, etc., were present and acting upon the uterus.

This paper does not enter upon the subject of treatment, yet I want to venture far enough to bring up the uselessness of uterine curettage. It is and has been practiced for the cure of leukorrhea and chronic endometritis. This mode of treatment should be discontinued and the teaching widely disseminated through the profession. There is not much doubt in the minds of all authorities today but that curettage opens up new channels for infection and does not cure the leukorrhea.

It was impressed upon me, when studying this subject, that great care should be taken in preparing the specimen, if it be a uterus which has been removed by operation, and that the actual cautery should be used in opening the specimen to prevent contamination.

DR. E. E. PADGETT (Indianapolis): My good friend, Doctor Habich, and I have talked this matter over, and I am sure it is with some little hesitation that he prepared this paper and read it, because it is different from the way we have been in the habit of thinking. I think we have long since decided that endometritis is a condition and not a disease, and that the thing we used to call endometritis when there was no other sign of infection past or present, was not true endometritis. On the other hand, it is very hard to believe when a uterus is seriously infected, without operation or any postpartum infection, that there is not some infection of the endometrium. I think we have infection of the endometrium in those cases. I believe everybody who operates on the female pelvis takes out a lot more uteri than they used to,

but seldom curette them. The reason for thinking they do is that I believe infection in the pelvis does not affect the endometrium as much as the uterine muscles, and if you are going to get at it you must remove the uterus. An acute gonorrhea, going like fire in dry leaves, undoubtedly goes through the lymphatics, and I think we have some infection of the endometrium in those cases; but the endometrium throws it off without any permanent injury to the uterine endometrium. I believe a large pus tube may give some infection from the uterine cavity at the time. I agree with Doctor Habich that a patient who for years has had a cervicitis that the patient has known about, may later, without any very violent symptoms, and without knowing that she is very sick, show some pus tubes. I think undoubtedly the infection is from the lymphatics and not from the endometrium.

I quite agree with what Doctor Baker has said about curettage for leukorrhea. I have not curetted for a long time except to remove particles from an incomplete operation. Your leukorrhea comes from the cervix and you cannot cure by curettment of the uterine canal.

DR. JAMES A. WORK, JR. (Elkhart): I would like to report a case which I reported before the South Bend Society a year ago. This woman came to me on account of sterility. She had been married some eight or nine years and was anxious to have a child. I found from the history that her husband had had gonorrhea before marriage, and on examination found chronic infection of the cervix with tenderness on both sides of the pelvis. While I was away on a vacation she was curetted by another physician—I might have done the same thing myself at that time—to relieve her and to see if she could bear a child. Two weeks after that time I was called to see her and found a large mass at the left side of the pelvis involving the tubes and ovary, which subsided under medical treatment. I believe that case adds to the argument which has been presented here today, that we should treat the endometrium with due respect.

DR. ALFRED S. JAEGER (Indianapolis): Doctor Habich's paper is valuable for two reasons: first, because it shows that the younger men are thinking for themselves, they are refusing to accept without proof the opinions advanced by the older men; and, secondly, because it has a very practical application, especially as far as treatment goes. Doctor Habich does not mean at all to convey the idea that there is no such thing as acute inflammation of the corpus endometrium, but that one cannot in the nature of things have a chronic endometritis. The woman every month sheds her endometrium, therefore there can be no chronic condition, in the sense the term is here used, with a membrane formed

every four weeks. That does not mean that one cannot have an acute recrudescence of this endometritis by extension. If I am not mistaken Doctor Habich used the expression "glandular" endometritis. There is no such thing, for the simple reason that, if my memory of the histology of the body of the uterus is correct, this endometrium does not have glands. It has folds or pseudo ducts which bend when they come in contact with the musculature, but there are no true glands above the internal os.

I recently in our local society reported a critical analysis of 214 cases of salpingitis. I took the stand that it was not right to say that a woman was infected with gonorrhea every time she had a salpingitis; that in a majority of cases the salpingitis is not primarily gonorrheal in character and not due to ascending inflammation. If you will analyze carefully your cases you will find that the salpingitis or its predisposing factor was present in many long before they possibly could have been infected with gonorrhea. You also will find that most of these women give a history of the acute exanthemas of childhood to which in a great percentage of cases the pelvic involvement may be traced. Also one frequently can trace a distinct relationship between inflammation of the tonsils and pelvic inflammation—I mean of the ovaries and tubes. If you go through your cases carefully you will be surprised at the frequency with which you find women who have had the mumps and shortly afterwards begin to have insidious symptoms in the pelvis which they have never had before, and which in time develop into the symptom complex of well defined pelvic disease.

DR. J. C. FLEMING (Elkhart): This paper does not deal with treatment, but I would like to mention two treatments that it seems to me are very important. First, in those cases of cervical endometritis, the so-called Schroder's operation, in which you go in and dissect out practically all that infected cervical tissue and turn up a flap of the vaginal mucous membrane, that is covered with squamous epithelium, to meet the mucosa of the uterine body. It seems to me that that gets rid of this chronic cervical infection, particularly if infection is combined with laceration. In those cases that are not combined with laceration the procedure that I use is that of Hunner of Baltimore, making linear scarifications down through the cervix every few millimeters, making this scarification through the cervical mucosa so as to destroy these infected glands. I think that is preferable to curettment in these cases.

There is another class of cases that have long passed the menopause and yet continue to have hemorrhage, cases in which you are led to suspect malignancy of the body of the uterus. You take out that uterus and you find it absolutely

free from fibroids, from malignancy, and the only thing you find is an endometrium which is covered with a slimy, mucoid exudate and granular tissue, what you would understand as a polypoid endometritis. You frequently see these in people of fifty or sixty.

DR. CARL HABICH, Indianapolis (closing): There was nothing said in my paper about treatment, although I have a few ideas about it. I believe, first, that the proper treatment has not been found. The nearer we approach amputation of the cervix the nearer we approach a cure. However, there are many objections to amputation of the cervix, and eventually I believe it will be abandoned in patients still in the child-bearing period because of the fact that eighty percent of women do not become pregnant, and of the twenty percent who do about seventy-five percent have distocia of the cervix. Curtis of Chicago has reported a series of cases of endocervicitis treated with radium. He says the objection is that it stops menstruation and causes sterility. The "Sturmdorf" operation is wrong because it covers up the infection. They reline the cervical canal with new mucosa, but the glands have not all been taken out, so we still have focal infection left. However, you do not see the signs in the vaginal discharge. In Sturmdorf's operation he takes out a cone-shaped piece of the cervix, down to the internal os, but he leaves the glands near the internal os, and you still have a focus of infection. My belief is that the nearer you approach amputation the nearer you approach cure.

In those cases mentioned of women past fifty who have had senile changes, their bleeding is due to endocrine disturbance, not to the local condition in the uterus.

POLYNEURITIC SYNDROME IN YOUNG CHILDREN*

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Few diseases of children present such an extremely wretched picture as the polyneuritic syndrome described by some authors under the term acrodynia. A case of this type recently came under my observation.

E. H., age 2 years, 2 months, was brought to The Clinic on March 11, 1920, with the complaints of failure to gain in weight, extreme irritability, sleeplessness, and skin eruption. She was the first child of healthy parents each 25 years of age. There was one other normal breast-fed child 3 months of age.

The patient weighed 3 pounds, 4 ounces at birth. Normal delivery. No cyanosis nor convulsions. Breast-fed exclusively for 10 months.

First teeth at 8 months. Walked at 1 year and talked at 13 months. She had been perfectly well until August, 1919, when she had "influenza". Since that time she suffered from frequent attacks of coryza. Since 10 months of age the diet has consisted exclusively of about a quart of milk, cooked cereal, toast, eggs occasionally, and scraped apple. For about three weeks previous to the first examination in March, 1920, there had been marked anorexia, diarrhea and loss of weight. She was quite inactive but extremely fretful. Seldom does one witness such a picture of dire distress as displayed by this child. Only a few moments of restless sleep were obtained at one time. It was necessary for the mother or grandmother to hold her and gently rub her hands or feet to give her any rest whatever. The body was continually covered with the most profuse perspiration. In a few moments the garments and bed-clothes would become saturated with moisture, requiring frequent changes throughout the day and night.

There was evidence of marked loss of weight, from 19 pounds 8 ounces on March 11 to 15 pounds 9 ounces on March 20. Temperature 100 degrees. The skin hung in loose dry folds with very poor tissue turgor. There was a generalized itching and scratching. Unless restrained, the child would scratch any exposed surface until the skin bled. On the cheeks were patches resembling weeping eczema. The buttocks were covered with similar lesions. The hands and feet were cold, bluish red, swollen, tender and apparently painful to the touch. The fingers were held spread apart. The skin covering the fingers and toes was macerated in places and showed many small ruptured vesicles. Conjunctival redness with lachrimation and photophobia was present early in the course. The anterior and posterior cervical glands were somewhat enlarged. There was a profuse purulent nasal discharge. A severe stomatitis with necrosis of the gums and alveolar processes with profuse malodorous salivation resulted in loss of six teeth. Ears, chest, heart and abdomen essentially negative. Deep reflexes obtained with difficulty.

Laboratory findings:

Leucocytes 23,000, two weeks later 15,000.

Wassermann—negative.

Von Pirquet—negative

Urine —negative.

Stool —negative.

X-ray—head and chest revealed no abnormalities. With a careful dietary regime and symptomatic treatment improvement began in about two weeks. Complete recovery, except for the loss of teeth, followed.

*Presented before the St. Joseph County Medical Society Oct. 26, 1920.

William Weston¹ reports eight cases of this type. He reviews the literature and considers "acrodynia" to be a food deficiency disease, although "this hypothesis is difficult to reconcile with the history of the epidemics". In Paris in 1828-30 certain barracks were entirely free from the disease, while others, the rations being the same in kind and variety in all, the crowding and hygienic diseases the same, were filled with patients suffering from this disease.

Byfield² reports a series of seventeen patients seen in a period of five years who present a similar clinical picture. His patients with one exception, a child of four years, were under three years of age. He considers that the disease is increasing, and that infection plays a more important role as an etiological factor than dietary error. The case presented here seems to support this conclusion. Postmortem examination in one of his cases "showed involvement of an occasional anterior horn cell of the spinal cord, gliosis about the central canal, and edema of the sensory roots". He suggests that the disease is a "post-influenzal radiculitis or sensory polyneuritis". As the disease tends to improve spontaneously, symptomatic treatment with the intention of making the patient comfortable should be instituted. Atropine may be used to control the profuse perspiration, chloral and bromides to provide much needed rest, alkalies if acetone is present in the urine, and soothing lotions such as calamine to the skin.

Summary:

A case exemplifying a "polyneuritic syndrome" is presented. The predominant symptoms consist of listlessness combined with extreme restlessness, rapid loss of weight, profuse perspiration, necrosis of gums and alveolar processes with loss of teeth, swollen, tender, cold, bluish-red fingers and toes with maceration of the skin over them, and diminished reflexes. The picture is associated with slight fever, leucocytosis, and suggests the result of an infection.

1. Weston: *Acrodynia*. *Archives of Pediatrics*. Vol. 37; No. 9; Sep. 20; p. 513.
2. Byfield. *American Journal Diseases of Children*. Vol. 20; Nov. '20; No. 5; 347. A more complete bibliography is given by Byfield.

THE TREATMENT OF AGED PATIENTS WITH BENIGN PROSTATIC TUMOR*

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The layman has not learned to come for prostatic surgery sufficiently early. As a consequence, aged patients with prostatic tumors are often poor surgical risks when first seen.

The treatment of the prostate is divided into three parts. The first in importance is the preparatory treatment, where the problem is to make these patients good surgical risks. The second is the post operative treatment, and the third and least in importance is the operation itself.

The mortality attending pioneer prostatic surgery has been largely overcome. This mortality was largely influenced by faulty kidney action resulting from urinary back-pressure. Added to this was the lowered resistance resulting from the exhaustion attending many of the terminal phases of this affliction, the broken sleep due to frequent urination, the pain and great muscular effort occasioned by the obstruction to the urinary flow, the toxemia from accumulation within the blood of elements in excess of the kidneys' ability to excrete. This resulted in urinary cachexia, digestive disorders and disturbances in cardiac function. (Blum.)

The aged patient is not a good surgical risk when compared with younger and more vigorous individuals. They come to us at an age when their vital forces are impaired as the natural result of years, hence the importance of preparatory care, a care that was largely neglected or imperfectly appreciated in the early history of prostatic surgery and which does not seem to be required in other surgery in patients of this age.

Our first concern on seeing these patients is to learn the condition of the bladder and kidneys. Is the bladder full of residual urine and has this fullness influenced the eliminating power of the kidneys? The effect on kidney elimination is not always influenced by the quantity of residual urine carried, but in every case with residual urine the assumption must be that the kidneys may be badly impaired. For a number of years the practice has been that no prostatic bladder should be emptied suddenly the first time, the rule being that half the quantity removed must be immediately replaced, using some appropriate fluid. That patient may be in any one of a number of phases of prostatic kidney, so that in extreme cases of bladder distension covering longer periods of time, fractional catheterization is to be advised. By this is meant that a small amount is removed by catheter every hour or two. This permits the back-pressure on the kidneys to be relieved slowly, greatly lessening danger of congestion, anuria and death.

The patient with a large retention and an overflowing bladder has what he terms a too active bladder. He has a polyuria of low specific gravity. The kidneys have a lowered permeability to solids and must try to make up the difference from normal by increasing the volume. Consequently these patients are thirsty,

*Presented before the Surgical Section of the Indiana State Medical Association at the South Bend Session, September, 1920.

and have a dry tongue and throat. Many patients will deprive themselves of water, believing that the less they drink the less they will be bothered. This results often in a condition where the patient comes with marked distention and back-pressure, and very little water or fluid reserve in the body for use in kidney stimulation. Let this distended bladder be suddenly emptied when very little fluid reserve is present and anuria and uremia may result. Repeated partial emptying, at the same time plying the patient with water at least equal to the amount withdrawn, supplies the necessary stimulation to keep the kidneys active. The fact that the kidneys have maintained their function while the weight of backpressure was being reduced, does not mean that we have sufficient kidney function to meet the shock of surgery. The probability is that we have not. The relatively high mortality following the one step prostatectomy is believed to have been due to this insufficiency. The principal effort of preparatory treatment is toward repair of this function. Constant or frequent bladder drainage, coupled with copious water intake, offers the best hope of improving the kidney function.

How are we to know when the kidney function will permit surgery? Phthalein and urea elimination, and estimations of the blood content of urea and creatinin, are the most important tests of the patient's metabolic state and renal efficiency. If these tests on several different days show a back-up or concentration of these elements in the blood and a deficiency in the urine, the evidence is complete that the kidneys are lacking and are not sufficient to warrant surgery. Phthalein is perhaps the most popular of the dye tests for elimination or filtering power of the kidneys. It has been objected to because the kidney function or permeability differs for each one of the many different principles it is called upon to excrete, both in health and in disease; that phthalein merely shows the permeability of the kidneys to one dye at the moment of administration and is a very one-sided picture. These objections are very correct, but the clinical fact remains that it is the best test we have for this purpose, and that it must always be used in conjunction with other tests. Braash, at the March meeting of the American Urologic Association at New York, brought out a very important point in the use of phthalein. When injected directly into the blood stream the filtering or elimination ability of the kidney is very accurately shown. When injected deeply into the muscle, absorption and elimination takes place rapidly, but a condition of acidosis causes a slower absorption of the dye into the blood stream. This point is very valuable to remember, since prostatics are prone to acidosis. Patients may have a very low elimination when

first seen, less than ten percent many times. The interval between operations will often show an improvement reaching fifty or sixty percent. I hardly feel safe with a percentage of less than thirty-five, although this is influenced greatly by the blood picture.

Impairment of other organs, such as the heart, lungs and bowels, the mental and nervous condition, will improve along with the increase in kidney elimination. These organs usually require some special attention, and must be carefully watched and their worth assayed.

The preliminary suprapubic cystotomy may be performed any time after we have found that emptying the bladder does not interfere with kidney activity. This can be done under local anesthesia and proves no load or shock to the patient's impoverished physical state. The interval between the two steps is utilized in building up the patient. The ideal in view is to get the patient out of bed, to have him walking about, and to have him conscious of a feeling of well-being equal to that obtaining before prostatic interference. This may require any time up to several months to obtain.

The increase in kidney elimination is one of the benefits accruing from the interval between operations. Another is that the benign prostatic tumor will decrease in size. I have found them at times apparently shrink half the size when first seen. These tumors are nearly always congested and swollen from straining, catheterizations, or infections when they first come to the surgeon's attention. Passing the catheter, or the tied-in catheter, will maintain some irritation, and the shrinking of the tumor is not so great as following suprapubic drainage. The interval between operations permits the patient to become stronger and at the same time his tumor becomes smaller.

The treatment up to the second step has all been preparatory. Everything has been done with a view to increasing the patient's resistance to surgery and decreasing the shock of surgery. He is up and about the room, walking in the halls, and if the weather permits, out in the yard. His eating has been regular, his sleeping largely undisturbed, though wet, he is mentally brighter and his courage is good. He has become optimistic. His tongue is no longer dry. His skin has lost that parched and doughy feel. His bowels have become regular in habit. His senile asthmatic or bronchial conditions have received the attention needed. He feels better than for several years and he is anxious for his surgery. The prospect of the first operation had filled him with fear and dread, but the actual operation disturbed him so little that he approaches the second operation with great confidence and assurance.

Removal of the prostate would be classed as a bloody operation. In the usual case, bleeding is controlled without any special measures to stop it. It is only when the enucleating finger strays beyond the surgical capsule that free or furious bleeding occurs, the periprostatic tissue outside the surgical capsule being rich in blood vessels. I have been in the habit of placing a Hagner bag in all of my cases, because I have never found any untoward effect and it does permit me to go home and to bed with a greater confidence in my ability to control quickly and easily any secondary hemorrhage that may occur. The tension of the Hagner bag is released in a few hours, the bag deflated and removed during the second day. The patient will complain of frequent bladder straining from the presence of the bag, and the suprapubic tube when deeply placed, which is promptly relieved on their removal.

The patient is given water freely up to the time he leaves for the operating room, and if gas-oxygen anesthesia has been used he may have it within an hour or two after returning to his room. Hiccoughing or other symptoms of threatening uremia must be met with heroic use of the water cure, the Murphy drop, hypodermoclysis, or intravenous use of normal salt or glucose until the symptoms disappear. Strychnia is one of the best stimulants of these old hearts. I have been putting them on it during the preparatory period and keeping it up well into the convalescent state. If the general strength will permit, the patient is given a physic, and feeding is started on the second or third day after operation. He is allowed up to the commode and up in a chair the following day for short periods. Getting out of bed has a wonderful psychic effect; his appetite and interest in things in general increase rapidly after getting up. The patient need not be kept in the hospital until the wound completely heals if he can return for observation. After the immediate operative emergency has passed, the surgical treatment is largely routine.

The clinical objective of our therapy is not the removal of a tumor, but the re-establishment of normal urinary bladder function. This may be interfered with by distortion of the bladder neck, complete atresia through closure at the site of internal meatus, small nodules or fragments of tumor that escaped attention at operation, and organized blood clots which may become encrusted with urinary salts with stone formation. The atrophic bladder, with huge quantities of residual urine and large type of tumor, is most liable to be followed by this sequela. However, this type is usually restored to reasonably normal function. Complete urethral atresia through closure of the bladder

mucosa at the site of the internal meatus occurred in one of my cases. The wound reopened after going home and no urine could be voided urethrally. It was impossible to pass a sound into the bladder by way of the urethra. With a cystoscope through the wound, and a sound in the urethra, the tip of the sound could be seen pushing up the thin layer or diaphragm of mucosa that had grown over where the prostate had been. The internal meatus was represented by a small dimple, through which the tip of the sound could not be pushed. Normal function was re-established in this way: A metal catheter with an opening in the distal end was passed, the tip pushing against the dimple representing the internal meatus, guided by the cystoscope through the wound. Wire was threaded down the metal catheter and easily punched through into the bladder as seen by the cystoscope. The wire, acting as a guide, permitted the rapid dilating of the internal meatus, followed by closure of wound and a return to normal function.

Persistence of a cloudy urine after operation suggests fragments of tumor left behind, blood clots possibly encrusted with urinary salts, infection higher up or due to a diverticulum. Cystoscopy should be done routinely on all cases before final dismissal, for one's own protection as well as for the benefit of the patient.

While the immediate cure is obtained in three or four weeks after operation, the patient's condition, both local and general, continues to improve for many months afterward, dribbling often disappearing with the lapse of time. The majority of patients continue to get up once or twice at night, but this does not disturb them, and they are very happy with their approximately normal condition which permits them to again enter social activities and take renewed interest in their affairs.

DISCUSSION

DR. FRANK H. JETT (Terre Haute): Cunningham several years ago laid down a simple procedure which is correct so often that it is very valuable. That is, have the patient urinate and empty the bladder as completely as you can. Then pass a catheter and see if he has residual urine and how much. A patient with so-called bladder trouble, who comes to the general practitioner, deserves this test. If with treatment over a reasonable time, residual urine is found to increase, the case certainly deserves a more extended examination by someone competent to do it, and perhaps prostatic surgery. If this can be driven home, there would be more early cases. If this is done, we will be doing less prostatic surgery with kidney lesions and the other general disturbances caused by kidney

lesions. This will put the weight of early operations on the man who sees the case first.

The essayist said no truer thing than that a prostatic obstruction case is not a prostatic case but a general case. The general condition of the patient must be the first consideration.

Just recently I did a one-step prostatectomy on a man 65 years old, and the man went through the operative period in perfect shape. There was very little reaction. A little over a month ago this same man had an attack of uremia, was unconscious for a few days, coming out of this before I operated on him. He looked well; ate well. His residual urine had been decreased gradually by catheter and he was in good shape generally. This man was suffering from urinary back-up and not an infection.

In regard to preliminary drainage, some do just as well with a catheter, and it is certainly simpler than a suprapubic drainage. It is not so good, however, in patients who are seriously sick and are going to have a prostatectomy. It seems to be well established now that after the obstruction is removed or drainage is instituted, there is a decrease in kidney function, and disturbance of the blood pressure which perhaps persists for a few days, then there is a gradual rise in kidney function until it is a great deal better than before drainage was instituted. It is also well known that infection in a suprapubic wound will auto-inoculate the patient in a few days' time and make him very resistant to this sort of infection. The danger of operating on a seriously sick patient is first, shock; second, hemorrhage; third, loss of kidney function; fourth, infection of suprapubic wound.

After suprapubic drainage is done under local anesthesia at your first or preliminary operation, you are getting rid of infection and loss of kidney function, which leaves you to consider in the second stage of the operation, shock and hemorrhage. In other words, you do not put all of your eggs in one basket.

A prostatic tumor should be taken out cleanly, staying in the line of cleavage, and if you are able to stay in this line, there is practically no hemorrhage. Regardless of which operation is done, the operation must be done with the fingers, and it is the educated finger that does the good operation. I have seen Dr. Wishard do his old, small incision operation quickly and nicely, and as to results, I personally know one case he operated fifteen years ago. I recently tested the man out, and he has no residual urine. The man is in good condition.

I think it is important for us to remember that the benign prostatic growth is, as a rule, adenoma, and the capsule of this so-called prostatic hypertrophy is compressed prostatic tissue;

that we are not doing a prostatectomy, but removing an adenoma; that the size of the adenoma means nothing, amounts to nothing, but the amount of residual urine, or the obstruction it causes, means everything; that there is a difference between bladder obstruction and bladder, ureter and kidney infection.

The future of prostatic surgery depends to a great extent on the man who sees these cases first. It is not necessary to make excuses for the mortality by prostatectomy now, but it can and should be improved.

DR. J. C. FLEMING (Elkhart): There are just one or two points I want to touch upon. In the first place, the present mortality in the hands of the general surgeon, according to Deaver, is twenty percent. According to Keyes, it is forty or fifty percent. There is something wrong or we would not have this terrific mortality. I want to discuss for a few moments the cause of that mortality.

In the first place uremia is given as the cause in something like 25 or 30 percent of those who die. That means that we have not observed the cases properly, our preliminary observation has not been careful enough. These cases should be recognized.

The two or three-step operation which has been advised by the essayist and by the doctor who has spoken in discussion is certainly the one to be used. It gives you an opportunity to observe the patient and get a better idea of his condition and his ability to withstand the operation. There is another advantage in the two-step operation which was referred to by Dr. Keyes, and that is that in the first stage the feeble cases die and you can brag about those who survive the second stage.

The second cause of death following a prostatectomy is sepsis. Those cases that die of sepsis die because they are operated too soon. This second stage is done too soon. If the bladder is septic it should be allowed to clean up and the patient in good condition before the second operation. If it is necessary put in a drainage tube and let the patient go home and stay several weeks before attempting the second operation. In that way a great many cases that would otherwise die of sepsis will go through safely. I think a great many of the deaths following prostatectomy in the hands of the general surgeon are due to the failure to differentiate between benign tumor and malignancy. We must remember that 20 percent of these cases are malignant, and if a man attempts to do the ordinary prostatectomy which he would have to do for a benign tumor on a malignant case he will tear through the capsule of the prostate and cause hemorrhage or sepsis and his patient will die. So that during this whole course of handling a prostatic case we must

bear in mind the great importance of distinguishing these cases that are malignant. Malignancy comes on later than the benign prostatic growth. That is, a large majority of cases that come on after seventy are malignant. Then, too, you can usually determine by physical examination whether a case is malignant or not. On rectal examination you will find areas of hardness throughout the gland which you do not get in benign tumor. With the sound or cystoscope in the urethra and one finger in the rectum as you palpate the sound, and as you reach the so-called trigonal or V shaped area between the two lateral lobes of the prostate, you can usually tell whether the case is malignant. In malignant cases we have this V shaped area indiviatro. It is irregular; it is not smooth. In other words, the malignant cases tend to go upwards towards the seminal vesicles and beyond the confines of the prostatic capsule. Then the malignant cases have more lancinating pains and sciatic. On cystoscopic examination the malignant cases do not show a smooth, round mound as in the benign condition. In the malignant condition you are apt to find edema, ulceration and papillary outgrowths, all of which suggest malignancy. Then when we have exhausted all of our methods of physical examination preceding operation, after we have done our first stage, our suprapubic cystostomy, we should again try to determine whether the case is malignant or not. I have made this rule in preliminary cystostomy, to put one finger in the bladder and the other finger in the rectum and palpate the gland carefully and try to determine in my own mind whether the case is malignant or not. If it is malignant, let it alone or send it to somebody who is experimenting with radium, or to Dr. Hugh Young, or some expert genito-urinary surgeon, and let him do a radical removal of prostate; but I think a great many of the deaths following prostatectomy are an attempt on the part of the general surgeon to treat malignancy of the prostate as we would treat a benign hypertrophy. Keyes says a benign hypertrophy patient should never die from prostatectomy. That may be an exaggeration, but the mortality should be very small if the patient is properly prepared and properly selected.

DR. A. M. HAYDEN (Evansville): I want to congratulate the doctor on his paper, especially because he lays great stress on preliminary treatment. The cases of prostatic hypertrophy, be they cancerous or benign, usually occur in old people, and every case that comes to the surgeon for treatment comes with crippled kidneys. You operate on that patient with the crippled kidneys and you will lose him. The important thing in the treatment of prostatic hypertrophy prior to the operation is to get the kidneys functioning

properly. There is a way to determine this. In the phthalein test we have a chemical test that will determine whether the kidney is functioning properly before the operation.

The doctor speaks of the two-stage operation. The first operation is just to give drainage and clear up the bladder, relieve the back-pressure of the kidneys. You will not get the kidneys to function properly unless you drain the bladder. I do not know that there is any advantage in draining through the suprapubic region over drainage through the urethra, and I do not care whether it takes three weeks or six months, I will not operate until the kidney functions properly. I want them to eliminate 60 to 70 percent, and to eliminate urine practically free from pus, acid urine that will show from 60 to 90 percent urea. You get a patient showing 60 to 90 percent of urea and eliminating from 60 to 70 percent by the phthalein test in the first two hours, and that patient will stand the operation well, whether he be ten years or one hundred years old. I speak of the suprapubic operation.

In regard to cancer of the prostate, I have never been able to determine positively beforehand whether I had a benign tumor of the prostate or a cancerous tumor, and for that reason I have practiced the Young operation, doing an outside operation. If we have any hemorrhage to control it is done before we leave the patient. If we have anything that looks like cancer we remove the entire prostate and capsule, and I want to say that twenty percent of tumors of the prostate have proved to be cancer. We make it our rule to have every prostate we remove examined under the microscope so as to determine whether it was or was not malignant. If you have a cancerous tumor of the prostate and you do not make a radical removal your patient will have trouble again and die. If you make a radical removal of the capsule and all, provided you get the case before the cancer cells have gone beyond the capsule, you will cure your patient. That has been my experience. I remember a case of cancer of the prostate, very large, that I had Doctor Wishard see with me eight or nine years ago. He as well as I and Doctor Alburger agreed it was cancer. That man is living today and perfectly healthy. We removed the entire prostate, the capsule and the trigone of bladder.

The gist of the whole thing in determining when to operate for prostatic hypertrophy is to get your kidneys to function properly. If they function properly you can go ahead and operate, no matter how old the man is.

DR. H. G. HAMER (Indianapolis): Prostatectomy is seldom, if ever, an emergency operation. That we can lay down as a starting point. I am wholly in accord with the methods of

preparation outlined by Dr. Crockett in his excellent paper. By prolonged catheter drainage, or if that is not well borne, suprapubic cystostomy and the insertion of a large tube, a period of observation is obtained during which the patient's general condition can be carefully studied and his fitness for operation determined. His fitness for operation will be determined by the general observation at the bedside, by observation of the amount and character of the renal secretions, by urinalysis, by the phthalein test and the blood urea and creatinin tests. By these observations we ought in a reasonable length of time to be able to determine his fitness for operation.

The selection of the type of operation depends wholly upon the conditions with which one is confronted. The one-stage operation may be selected if the man's condition is excellent and the growth is not large. However, if his condition is poor, the two-stage operation is always better. The results are uniformly more satisfactory. In a word, I would say that careful preparatory treatment, with special emphasis upon securing information by every means possible of the patient's fitness for operation, the selection of an operative procedure calculated to reduce the risk to a minimum, the selection of the proper method of anesthesia, control of hemorrhage, and good nursing are the things upon which we base our expectations of good results following prostatectomy.

DR. P. E. McCOWN (Indianapolis): The weak point of a suprapubic prostatectomy is the hemorrhage. The Hagner bag is perhaps the best method of controlling hemorrhage. However, as Doctor Crockett has said, the Hagner bag is a thing of torture, and in most cases you must keep the patient under morphine. It has occurred to me, since we have no better surgical measure to control the hemorrhage in suprapubic prostatectomy, that we might get along if we would use measures to first ascertain the coagulability of the blood. Where we have a blood that shows coagulation in two to four minutes it has been my custom not to use any measure to control hemorrhage. If the prostatectomy is properly done the finger does not go beyond the surgical capsule, and if the enucleation finger adheres closely to the prostatic adenoma the hemorrhage is simply that which oozes through small veins. My idea of a suprapubic prostatectomy is removal of an adenoma leaving the normal prostatic tissue, and this must be true because a great many patients have a return of sex function. Instead of packing with gauze, etc., we make an investigation of the coagulability of the blood, and where it is necessary use such methods as the administration of calcium salts or the various hemostatic serums, to increase the coagulability, and we find we

have a much more comfortable patient. He loses some blood, but not enough to lower his resistance, he gets out of bed early, he has early healing of his wound because of lack of traumatism to the mucous membranes, and I believe that is the best method of getting around this matter of hemorrhage. It is not of course a complete method, not as adequate as we would like, but at least it is a way of doing away with the danger of severe hemorrhage.

Another important thing is to get these patients operated early. We find a number of cases who have gone through prostatectomy where interstitial nephritis was present, and these cases have no difficulty aside from the kidney condition, a condition which we cannot eradicate.

DR. JOSEPH RILUS EASTMAN (Indianapolis):

I wish to say a few words concerning what I regard as a most important factor in reducing the mortality of prostatectomy. It has been touched upon by the gentlemen who have spoken. I refer to the performance of prostatectomy under local anesthesia. As Doctor Hayden says, these patients are practically all nephritics; they have crippled kidneys, and to give these men a general anesthetic is in many cases entirely unnecessary. Kindly acquit me of making a sensational statement when I say that suprapubic prostatectomy can nearly always be done under local anesthesia even in the bed. I wish to adjure particularly the younger men to do suprapubic cystostomy, and remove adenomas of the prostate with the finger under local anesthesia, principally because of the very great ease of enucleation by that process. It is a very simple and gratifying performance. Why give ether or any inhalation of anesthesia to a man with crippled kidneys when we can easily take the adenoma out through the suprapubic wound under local anesthesia?

John B. Deaver, in a recent number of *Surgery, Gynecology and Obstetrics*, said that he had not the time to do a prostatectomy, suprapubic or otherwise, under local anesthesia. I submit to you that if Deaver, or any other great and brilliant man, has not time to give his patient the benefit of this life-saving procedure, then it is his solemn duty to turn that patient over to some man, perhaps of less skill, who has time to give to his patient the benefit of this safeguard—prostatectomy under local anesthesia.

DR. CHARLES STOLTZ (South Bend): Whenever I want to hear a particularly moribund subject discussed I look for a paper on prostatectomy. In most surgical procedures the recoveries are above fifty percent, but in prostatectomy we still have the everlasting discussion of the high mortality.

There is perhaps no simple procedure in which the general practitioner, or even the surgeon or diagnostician, lacks so much as in the rectal touch. I recently had a man of middle age who had been pawed over by a half-dozen members of the profession. Rectal touch demonstrated a prostate full of calculi.

I recently examined a Civil War Veteran who had for years been getting up four or five times a night to urinate. He was praising his medical practitioner, saying how long he had kept him going by treating his kidneys. Rectal touch demonstrated his prostate to be as big as a grapefruit; and the doctor has treated him so long that I do not believe any surgeon would care to take the moribund old man to the operating table.

Doctor Fleming spoke of sending these cases of malignancy to the man who is "experimenting with radium"—a fine pleantry of Doctor Fleming's, but I don't think much of the procedure. Cancer of the prostate is to me a hopeless affair. Kolisher of Chicago says when he goes into a prostate and finds malignancy he backs out. One such fellow whom I operated a year ago is taking so much morphine that the druggists are wild.

The proper preparation of the patient and the early recognition of prostatic trouble is going to reduce the mortality more than anything else. You cannot take a wrecked human machine and rebuild it. We want to be fair, and while it is all right to be introspective, I think we should demand that cases brought to us have at least fair treatment before they come.

Doctor Eastman's urging local anesthesia is timely. I agree with him that if a man has not time to do the thing right he had better let somebody else do it.

I make a perineal incision up to the prostate big enough to insert the left index finger and then do a suprapubic prostatectomy. Working with both fingers instead of one I can sometimes do more with the lower finger than with the one in the bladder. With these two openings I can guard against hemorrhage very satisfactorily by packing. I close the suprapubic wound and put a large drainage tube in below. A very good surgeon once said there is no use putting in a perineal tube, that it does not drain. You can drain through any tube that is open. If you will insert an ordinary catheter into the bladder through the tube and then take an ordinary ear syringe and rinse out the bladder, the perineal tube will drain.

The thing I want to emphasize is that we cannot realize low mortality in prostatic surgery until we have the profession at large educated to recognize these cases and get them to operation early, just as we are educating the laity and profession to look out for malignancy and

get it to operation early. When the patient is a wreck surgery is hopeless.

DR. BERNHARD ERDMAN (Indianapolis): I would like to say just a word or two on the question of mortality: Some two or three years ago at the meeting at Evansville, and again last year at Indianapolis, Doctors Wishard and Hamer reported 120 cases with but two or three deaths. Doctor Fleming's statement of Keyes' statistics is very dissimilar. In the hands of the general surgeon the mortality remains high, while the trained urologist has an ever increasing percentage of recoveries. Perhaps the most important statistics covering a large number of cases are those of Fauchet of France who has done probably a thousand or twelve hundred operations with a mortality of about 10 percent for the first 400. In the last 100 less than 4 percent.

I do not believe the mortality of prostatectomy, in the hands of men who will prepare their patients as Doctor Crockett suggests, will be anywhere near 10 percent. Take the cases as they come, it makes no difference whether you make the preliminary operation above and drain and remove through the suprapubic opening or remove the gland and then drain from below, as recently suggested by Ochsner.

The whole thing rests upon the ability of the individual to prepare himself for what is still a surgical procedure of considerable moment even in the hands of the competent urologist.

DR. FRANK S. CROCKETT, Lafayette (closing): The two-step operation is very important in that the first step, whether suprapubic cystostomy, tied in catheter or frequent catheterization, is what produces the result. Doctor Fleming spoke of the septic condition of the bladder. He feels that the cystitis must be healed before he goes into the second step. I do not believe we should refuse the second step in a man whose bladder will not clear up, because many times we have conditions which are practically impossible to clear up until you take the tumor out.

Speaking of malignancy, my personal experience has been that the pathologist has found some malignancies that seemed to be benign adenomas to the rectal touch. Still these patients make a good postoperative recovery and are apparently well, the malignancy not having gotten out of the surgical capsule.

The interval between the two steps permits the doubtful cases to become plainer, as the shrinking of the tumor will bring into prominence the carcinomatous nodule. In 1914 I was in St. Peter's in London, and they had a large number of these cases. They used nothing to check the blood but hot water in the bladder, or in case of violent bleeding they would pack.

Nothing was used to stop the bleeding, such as packing gauze, the Hagner bag, or some of the other clever things devised for that purpose. The advantage of the Hagner bag is that it will give the patient less discomfort while it is in and in getting it out. It is easy to pack the prostatic cavity because the patient is under an anesthetic, but when you take it out the gauze packing will produce more discomfort than when taking out a Hagner bag.

SUBCUTANEOUS INJURIES TO THE LIVER*

BY

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In cases of abdominal injury, the liver is more frequently involved than any of the other solid viscera. Johnson, in reviewing a series of 365 cases of subcutaneous injuries to the solid abdominal organs, found the liver injured in 189, while the total of the kidneys, spleen and pancreas was only 176. The preponderance of hepatic lesions is due to several factors: *viz.*, the great size of the liver, its friable nature, and its anatomical position. All these things make it more liable to injury by indirect violence, as by falls from a height upon the feet or buttocks, or upon the abdomen in falls in water. Moreover the right lobe, lying as it does wedged in between the ribs and the spine and rigidly anchored by its firm attachments, is peculiarly susceptible to crushing injuries, such as run-over accidents, crushing between cars, blows from a club or kicks over either the upper abdomen or lower thorax.

In subcutaneous rupture of the liver, the right lobe is most frequently involved. W. H. Battle, writing in *Practitioner*, July, 1910, reviews the combined statistics of Mayer and Ogston which show that injuries to the right lobe bear the relation to left lobe injuries of *three to one*. There is, of course, a great variation in the size and shape of the tears, which may be linear or stellate; a part of the substance of the liver may be completely separated, as in a case of the writer's; the liver may have merely a severe contusion with the formation of a hematoma in the liver substance; the liver may be more or less completely torn away from the diaphragm as in a case reported below; or it may be crushed and broken into pulp.

Certain pathological conditions predispose to liver injuries, and among these may be mentioned alcoholism, liver tumors, malaria, syphilis, tuberculosis, and amyloid degeneration. Any local or systemic change which causes enlargement or softening of the liver makes it more susceptible to injury.

Rupture of the liver carries a high mortality. B. T. Tilton, *Annals of Surgery*, reported twenty-five cases collected from New York hospitals for a ten year period with a general mortality of 44 per cent. Twenty of these cases were operated upon early with a mortality of 40 per cent; the mortality of unoperated cases was 62½ per cent. Terrier and Ouvray report forty-five cases, all operated, with a 30 per cent mortality. Among the more severe complications of liver injury may be noted fracture of ribs, rupture of lung, spleen, or kidney, or more rarely, some part of the alimentary canal.

The symptoms of subcutaneous rupture are, generally speaking, those of shock and hemorrhage. In any severe injury of the lower right chest or upper right abdomen, especially if the chest shows severe contusion or fracture of lower ribs, the possibility of liver injury should be borne in mind. Quite often, however, the symptoms of shock may be lacking immediately after the injury; in fact, the pulse may be considerably slower during the first few hours. Several writers have mentioned this bradycardia as of diagnostic import, and Finisterer was able to demonstrate it in twenty animals in whom he experimentally produced liver injuries. He also reports two cases of liver rupture which showed pulse rates of 48 and 52.

The most constant symptom is pain in the abdomen. This pain is severe and persistent, usually referred to the right side and is due largely to peritoneal irritation from escaped blood. Rigidity of the abdominal muscles is fairly constant. This condition also is due to escaped blood and is usually not marked immediately after injury. Tenderness can be elicited in the region of the liver; the ribs of the affected side are less movable; often there is difficulty in breathing, and occasionally there is pain referred to the right shoulder or scapula. When bleeding occurs, the blood usually accumulates in the right iliac fossa. The liver dullness may at first be increased. Immediate loss of liver dullness indicates a rupture of stomach or bowel, with accumulation of gas between liver and abdominal walls. Later disappearance of the dullness means bowel distension due to peritoneal irritation. Jaundice may appear in from two to four days from absorption of bile from the peritoneum. This symptom is more marked and more constant in injuries to the bile tract.

In many cases of indirect injury, as in falls from a height, an exact diagnosis can not be made until the abdomen has been opened, the general symptoms of shock, hemorrhage, abdominal pain, vomiting, hiccough, etc., merely indicating injury to some abdominal viscera, the one at fault being discovered only at operation.

*Read before the Twelfth District Medical Society Meeting, Fort Wayne, November 10, 1920.

Undoubtedly many of the less serious injuries to the liver recover without their existence having been discovered.

The treatment of the condition is of course, essentially surgical. In this country, suture of the liver is done wherever possible. Wherever the technical difficulties of suture are too great, gauze packing alone is relied upon. Some of the foreign operators use gauze packing entirely, preferring it to suture as being both quicker and safer.

Following is the report of 5 cases of subcutaneous injury to the liver:

Case 1, Laborer, age 37. Pushing locomotive driving wheels along track, when second pair of wheels roiled down, crushing right lower chest and upper abdomen between them. Brought to Sacred Heart Hospital in ambulance. Conscious, complaining of intense abdominal pain, with dyspnoea. Bloody expectoration. pulse 80. Pulse rate rapidly increased with signs of hemorrhage. Subcutaneous emphysema, dullness of right chest and abdomen. Death in 24 hours. Autopsy showed perforated lung with hemo-thorax, and multiple lacerations of the liver.

Case 2, Brakeman, age 27. Sitting at table in caboose writing report, when train broke in two, the sudden application of the air brakes in the rear section throwing him against the table with great violence, striking right upper abdomen on edge of table. Admitted to Sacred Heart Hospital at midnight, about three hours after injury. Pulse 90. Rigidity of right abdomen with tenderness on pressure, some dullness in right iliac fossa. Complained of severe constant abdominal pain made worse by deep inspiration. No particular evidence of shock or active hemorrhage being present, it was decided to observe him until morning, when aside from some slight distension his general condition was found to be better. The third day after injury developed jaundice which became marked, and then gradually subsided. Dullness in right iliac fossa gradually disappeared. Discharged from hospital at end of two weeks.

Case 3 (Case of Dr. J. F. Thomson), farmer, age 45. Kicked in upper abdomen by horse. Admitted to Sacred Heart Hospital about one hour after injury, complaining bitterly of pain in upper abdomen and right shoulder. Pulse 82. No mark on abdomen. Right muscles extremely tense, with great tenderness on palpation of liver region. Dullness in right flank. Immediate operation advised and accepted. Incision through upper right rectus. Abdomen filled with blood. Lying free on surface of transverse colon was a piece of liver about $3 \times 2 \times \frac{1}{2}$ inches in size. Exploration showed tear through liver just to right of gall bladder sulcus, extending through entire thickness of liver, and

about three finger breadths in depth. Bleeding controlled by gauze pack and wound closed. Gauze removed on seventh day. Patient discharged from hospital at end of third week.

Case 4, Railway Conductor, age 43. Thrown violently against table in caboose when his train was suddenly stopped by emergency application of air brakes. Admitted to Sacred Heart Hospital two hours after injury, suffering intense abdominal pain. Pulse 80. Muscular rigidity over upper abdomen. History stated that for years had had small umbilical hernia which at time of examination was about the size of hen's egg, tense and irreducible. Immediate operation. Elliptical excision of umbilicus and hernial sac. Exploration of abdomen discovered sub-serous hematoma of anterior surface of right lobe of liver. Wound closed with repair of hernia. Discharged in three weeks.

Case 5 (case of Dr. Woodward Hays, Albion, Ind.), farmer, age 46. While engaged in putting roof on barn, nails securing to roof piece of lumber on which he was standing, pulled out, permitting him to slide down slope of roof. He fell a distance of about 18 feet, striking a pile of lumber on the ground. He stated that as he fell, he saw the lumber and fell with arms outstretched in an effort to bridge the pile. He struck first on his hands, one on each side of the timbers, and then his upper abdomen struck as the weight of his fall flexed his arms. Admitted to Sacred Heart Hospital about four hours after injury. Pulse rate of 80. Lacerated wound over right eye; abrasions of both hands and forearms; swelling of both wrists. No mark on abdomen. Intense, constant abdominal pain, referred more especially to upper right quadrant. Some dullness in right iliac fossa; muscular rigidity. Upper abdomen tender to palpation. No blood in urine. Operation (half hour after admission). Incision through upper right rectus. Considerable free blood in abdomen. Blood found to be trickling down over anterior surface of liver. Further exploration showed a separation of liver from attachment to diaphragm. Bleeding controlled by gauze pack; wound closed. Gauze removed on seventh day. Discharged from hospital on 18th day.

THE PHYSICIAN

THE FAILURE OF MODERN MEDICINE TO PROPERLY
EVALUATE PHYSIOTHERAPY*

BY FRANK B. WYNN

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The over-weening influence of drug therapy for centuries past, perpetuated through both lay and professional prejudice, has militated against reforms and the introduction of other methods

*Twelfth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

of treating disease. Dignified by age, endorsed by custom, and approved by the profession, medicinal therapy has frowned upon physical therapy as belonging to a lower class; suspected even of being non-professional. The physician who dared espouse these agencies with enthusiasm was at once suspected by the staid profession of having a mercenary ax to grind; if indeed he was not stigmatized as an out-and-out quack.

Under the term physiotherapy are comprehended those natural forces which, when properly applied, have to do with maintenance of health, comfort and even life itself; or when misused or abused, are provocative of disease; and when carefully studied and skillfully applied become most valuable in a curative and preventive sense. Some of the more common of these are: Food and drink; air—cold or warm, stagnant or circulating, dry or moist; light, sunshine, darkness; water—by ingestion or hydro-therapy; heat or cold; exercise—graduated, active or passive; rest—mental or physical; isolation and seclusion; amusement and recreation; interest and occupation.

Have these things received the consideration at the hands of scientific medicine which their importance demands? Through all the tedious centuries of evolution in civilization, they have, from necessity or choice, been employed in disease, with real or supposed benefit to the patient. There is in all of us a deep ingrained faith in their efficacy. Whose memory does not hark back to the days of childhood, when a solicitous mother or the benevolent family doctor did not have recourse to them? Even now my senses are stirred by the memory of hot poultices—redolent with onions, mushy with bread and milk, or sticky with flax-seed; of tingling counter-irritants and smelly fomentations; of dry heat and moist heat; of hot drinks and cold drinks; of gentle and affectionate hands stroking away pain or limbering up stiff joints; of cheering words and exhortation to patience, faith and grit to go through with a disagreeable job—all that complex which makes up the warp and woof of the childhood of ordinary folks.

Should the profession taboo these common domestic methods of treatment simply because universally employed? It were as wise to abandon the use of bread because almost universally eaten by the human race. Finer wisdom would be shown if we set about studying these common things scientifically and applying the knowledge in the conservation of health and the cure of disease. Use them we all do, but how much systematic and thorough instruction concerning them did any student ever receive during his college course? Lengthy consideration and

great emphasis were placed upon drug administration, surgical methods of relief, and recently vaccines and antitoxines, but as for physiotherapeutic measures—these were viewed as mere excusable fillings, designed to calm the mind of the patient, soften the tense anxiety of relatives, and make things easier for the medical attendant. These indisputable truths are strange commentaries on the defects of medical training. When we come honestly to weigh the truth, it is appalling the ignorance of the profession concerning these forces which we should utilize with the finest skill and the most acute intelligence.

A few common illustrations may be offered showing the usual bent of professional thought as to the relative value of pharmaceutic as against the physiotherapeutic methods.

A coated tongue, fetid breath, headache and highly colored urine, suggest toxemia for which the vast majority of physicians will prescribe calomel followed by a saline—missing the larger factor in relief which would come from proper diet, free fluid ingestion, proctoclysis, and properly applied hydrotherapy.

A pale, wan child is secluded in a dark, stagnant room, given iron for its anemia while its rebellious nature yearns for sunlight and the outdoors. It is taught to abhor circulating air, forgetful of the fact that this very movement of the air heightens its life and blood-making value, just as the ripples and cataracts purify water. It is fed upon broths when nature craves the succulent, fresh vegetables and fruits—with their scouring, cleansing properties to the bowel, and their chlorophyll content, so potent in blood formation. This delicate child needs these natural blessings and it is one of the highest functions of the physician to know how to bring the little patient under their benign influence. In the early spring-time I plant indoors in boxes the tiny seeds which burst their protective coats, rupture the soil-crust, and thrust their white petals toward the light; actually leaning forward to receive the welcome sun-rays; and finally exchanging their anemic pallor for the sturdy, beautiful green of the growing plants. Is not this an eloquent sermon upon physiotherapy? Should we be less wise than the unthinking plants, regarding the value of sunshine?

Think of the great army of American constipation! The vast majority of these innumerable hosts are women—devotees at the shrine of aloes and cascara. But do even these efficacious remedies work a cure? Let us rather say they establish a habit. If complete relief is to be enjoyed it must come chiefly through the proper application of physiotherapy—copious water ingestion, coarse, bulk-forming and succulent

foods, which are both exercising and scouring to the intestines; and that form of bodily exercise which brings the abdominal muscles into frequent and prolonged activity. True it is difficult to combat the social customs of modern times, the tendency of American women of the so-called upper classes to physical idleness and enervating pursuits. The easy and lucrative way for the profession is to fall in line with indolent habits, the pink teas, card clubs and whirl of social engagements with their irregular hours and excesses—and continue to prescribe laxatives as a routine. A larger, more wholesome and more permanent service would be rendered the individual and the community by insistently inculcating the doctrine, and following it to execution, of more active participation in the physical labor of the household; of more frequent open-air recreations which develop the muscular system, stimulate pride in physical accomplishments; or better still where possible the cultivation of growing things—flowers, shrubs, fruits, vegetables, etc. More difficult let us admit, is the execution of such a program, than the writing of a prescription. The successful accomplishment of this task requires, on the part of the physician, first, the art of persuasion; and secondly a generalship which plans with far-sight for the winning of the battle and brooks no deviation from the orders given. On the part of the patient there is demanded unwavering faith in the wisdom and sincerity of the medical commander and a firm determination to see the thing through to a successful finish. To break one of the habit of chronic constipation is a tedious and difficult task and is worth a good price. If we would cure, rather than temporize with and cultivate it, we must proceed by the physiotherapeutic route.

Or the subject of consideration may be a successful man of affairs—desk-ridden, plethoric from overeating and under-exercising, bowels rebellious under their load, liver enlarged, tender and skin icteric, throbbing heart, pounding headache, and high blood-pressure; a man keen, tense, ambitious for large results, and explosive under the nagging irritations of his great responsibilities—how is he to be treated? Shall we seek his relief by draining the gall-bladder, cholagogue purges, or hepatic stimulants? Should we reduce his blood-pressure by cardiac depressants, or remedies inducing vaso-motor relaxation; relieve his headache by coal-tar derivatives and quiet his nerves with bromides? One or the other of these things may be indicated. Or may we not with even greater wisdom map out for him an entirely new order of living—holding up perhaps for his temporary emulation the oriental philosophy of passivity rather than the restless, driving ambition of the

occidental races; exhorting him to restful contemplation for the sake of his peace of mind; inviting him into the paths of tranquilizing Nature for his tired nerves; for the sweetening of his irritable disposition, suggesting the fairyland of wonders and beauties found in the great outdoors.

Of all diseases what is comparable in vital interest, to both physician and layman, with pulmonary tuberculosis? So familiar is the world with its prevalence and ravages, that statistics need not be quoted. Only a few decades ago, its hopeless gloom dampened the ardor of the physician and enshrouded the victim of this malady with despair. Quackery made easy prey of these pathetic sufferers, for in the current of despondency they grasped at straws. Under alluring promises they were persuaded to swallow benumbing narcotics, to induce rest, relieve cough or pain, and stimulants which aroused only artificial strength; finally sinking under the wave of mixed infection and toxemia.

Thanks to the discovery of its cause and a better understanding of its management we now look upon pulmonary tuberculosis with hope, confident of its prevention, arrest or cure. What has wrought this marvelous improvement? Has it been through the legerdemain of a medicinal potion? Aside from the great value of opium in controlling cough, pain and restlessness, the reactive tissue repair in some chronic conditions to iodine products, and the use of tonics, what claim can drug therapy make for the extraordinary advancement achieved in the management of pulmonary tuberculosis? Are we not bound to admit that the great blessing of progress in the treatment of this protean malady has come about almost entirely through physiotherapeutic factors; that is to say, in prevention and management we have come to a better understanding of the natural forces—air, sunlight, food, rest, exercise, recreation and occupation? Yet with these vast and convincing evidences of progress before the profession, can we truthfully claim that anything more than the most superficial study of these natural agencies has been made? It all seems so simple that we pass it over with trite instructions and immature thought as to details in working out the program. Thus most unfortunately the patient gets the impression that the whole scheme of procedure is so simple that the physician is not needed in carrying out the treatment. Taking things into his own hands, the layman fails to properly interpret symptoms and conditions; there is misapplication of physiotherapeutic procedure; and in the end disappointment and disaster result. To illustrate the point more fully: At one time in the course of pulmonary tuberculosis, rest is imperative. Who should know this but the alert and trained physician? If progress towards

cure is made, there must come an end even to rest in a case. Again who shall call the change to exercise but the experienced observer? Then arises the question of the kind of exercise; the frequency, amount, and the correct interpretation of the body reactions to varying grades of mental or physical activity. Thus it becomes evident that things apparently so simple call for the highest intelligence and judgment; the most painstaking and patient observation; and require most untiring and insistent direction. The successful management of a case of pulmonary tuberculosis, from its recognition, through the tedious years to its arrest or cure, constitutes one of the most difficult problems in medical practice. If gratifying results are attained, they are brought about, not so much through drug administration as from the intelligent, patient and painstaking application of physiotherapeutic methods.

The failure of medical education to adequately instruct students upon these important phases of disease management necessarily places a handicap upon hospitals and training schools for nurses. Despite the enormous growth of hospitals in number and structural excellence, improvement in artistic appearances, hotel conveniences, laboratory and surgical equipment, how many institutions have the physical equipment, for example, to make proper application of hydrotherapy? Must the public continue to depend upon Turkish-bath establishments for refreshing and health-giving hydrotherapy? Do not these latter constitute the physician's chief source of instruction upon this subject, rather than the medical schools or hospitals? How many trained or graduate nurses know anything about the therapeutic bath, other than for sanitary purposes; a cold sponge for hyperpyrexia; or a hot pack for grave toxic conditions? Let us not condemn nurses for these shortcomings, but rather confess our own lack of knowledge concerning the value and methods of hydrotherapy.

Nearly akin to the foregoing are those physical manipulations comprehended under the term mechano-therapy. These include massage, Swedish movement, developing and upbuilding exercises as in gymnasiums, correctional movements for orthopedic conditions, re-education exercises as in the ataxia of tabes dorsalis. How many graduate nurses are capable of carrying out these technical procedures? That they do not understand them is unfortunate, but how much greater the reflection on the medical schools and the profession!

Is it not to the discredit of medical colleges that most of our knowledge concerning these matters comes from the gymnasium and athletic field? Is there anyone of intelligence who has

the temerity to claim such things have not extreme value? If such there were, has not the World War removed all question from the mind of the doubter? Who has not seen, by scores and by hundreds, lank, stoop-shouldered, anemic or sluggish youths march away to camp, from counters, shops and desks, to return in a few months, erect, stalwart, manly-looking fellows, with brawn in their muscles, courage written upon their faces, and hope gleaming from their eyes? What is the matter with medical education, if the physician is not able, day by day, to accomplish the same results, through somewhat similar agencies?

In protest against the line of argument here offered, the voice of the average physician pleads as follows: "All that you say regarding the failure of medical schools to teach physiotherapeutics, and our ignorance upon these subjects may be true; but have you paused to consider the monetary sacrifice to the physician, which would arise from devoting large time to the carrying out of such measures? People are willing to pay for surgical attention, and for the routine care which involves the administration of medicinal remedies, but they have not been educated to properly evaluate these common natural forces in the management of disease. On our part it means tedious drudgery and poor pay in return." Such is the prevailing obsession which has for long controlled professional conduct. In answer to this line of argument let it be asked if the noted springs and health resorts where hydrotherapy has been emphasized have not yielded a substantial financial return? Some of these institutions have made commendable effort to set upon their methods the stamp of scientific and professional respectability. Besides thorough clinical and laboratory study, a few have made earnest endeavor, in scientific manner, to apply physiotherapeutic methods. The majority, however, are more strictly speaking only hotels and resting places. In some it is often saddening to find a good record, dimmed by the grandiloquent claims of a mineral water. Even such institutions as the foregoing have scarcely kept pace with the public demand for accommodations. The foregoing commercial facts seem to me to controvert the professional fear that hydrotherapeutic methods will not pay.

On turning to manual therapy, as an avenue to lucrative return, is it not true that within the past ten years, quasi-professional men, chiefly of mediocre education and the most brief and superficial training in the fundamental branches of science, have carried manual therapy to a point in public esteem where it receives credence and support from many intelligent laymen? There are five hundred chiropractors in Indiana alone, and two thousand students of

chiropractic in an Iowa college. We cannot ridicule these sects out of existence. We may rail at their brazen pretense, declaim against their ignorance and justly arraign their reckless action in treating serious cases which they know nothing about, but they go merrily on the highway to business success. Is the numerical growth and achievement of osteopathy and chiropractic merely the result of bold advertisement and humbug, or is there back of it all some germ of truth which we have overlooked or refused to see? If so limited a phase of physiotherapy can be made to pay financially by those poorly equipped, how much greater should be the monetary benefits which might be expected if well-trained physicians made scientific study and intelligent application of the broad problem of physiotherapy.

The main purpose of this discussion is to show that the medical profession has failed to measure up to duty in the study and application of the common natural agencies in relation to the cause and cure of disease. We have failed, first because medical schools have not taught these things thoroughly or systematically; because hospitals have not provided the facilities or a staff of teachers thoroughly competent to instruct; and third because nurses have not

received efficient instruction in carrying out the methods. Foundations and endowments have been lavish in appropriations of money for the study of pathological and chemical problems relating to disease. But where have large sums been expended in the study of heat, cold, light, air, water, rest, exercise, manipulation, vocation, etc., in relation to disease? Our very neglect to give these subjects the attention they merit in therapy has been more responsible than aught else for the development of recent sects in medicine. If we would, therefore, prevent the tendency to erratic and sensational off-shoots from medicine, let us give no substantial excuse for their origin. Behold the rapidly increasing flood of irregular practitioners, most of them conscienceless pretenders or mercenary commercialists seeking short cuts to the rights and privileges of medical practice. Shall we allow them to possess the domains of legitimate medicine? However venal and commercial may be chiropractic and its kind, let not this fact prejudice us against the germ of truth they may contain. Our duty should be to garner the grain but cast out the chaff—educationally and professionally. Let the medical profession, aroused to full consciousness of duty, reclaim and cultivate with scientific and clinical thoroughness a neglected field—physiotherapy.

Roger S. Morris, Cincinnati (*Jour. A. M. A.*, May 14, 1921), has observed a number of cases in which, following an attack of pneumonia, dullness over the affected lobe became more intense, even flat, with distant or absent breath sounds, not infrequently egophony, and diminished or absent vocal fremitus; often with dullness over the lower dorsal spines and a paravertebral triangle of dullness on the unaffected side. Given such physical signs, exploratory puncture is always indicated. If a syringeful of pus is obtained, the diagnosis is practically certain, and drainage is indicated. It sometimes happens, however, that only a drop or two of pus is obtained, and then interpretation of the finding is more difficult. There have been many instances in which, with a delayed resolution, all the signs of fluid in the pleural cavity have been observed. At times, the signs persist for two or three days, only to disappear for a short time or permanently. Not infrequently the signs of fluid are present one day, absent the next, and reappear the third day. In such cases, exploratory puncture usually fails to reveal pus. Morris has come to the conclusion, as a result of numerous necropsy findings, that all of the evidences of fluid in the pleural cavity may result when, in addition to infiltration of the lung, the bronchi are filled with secretion. This, in effect, is a massive pneumonia, a condition which has long been known to simulate fluid in the pleural cavity.

Julian H. Lewis, Chicago (*Jour. A. M. A.*, May 14, 1921), states that the complement fixation test can be used to detect extremely small amounts of one serum in the presence of larger amounts of another.

The absorption of serum from the subcutaneous tissues is very slow.

The main route of absorption from the subcutaneous tissues is through the lymphatics.

The rate of absorption of horse serum injected subcutaneously is apparently too slow to explain the cases of sudden anaphylactic death which occasionally have followed the administration of antitoxic serums in man.

Certain procedures, such as massage of the site of injection, and the injecting of large volumes under high pressure can hasten the appearance in the circulation of horse serum injected subcutaneously.

Because of the suddenness with which it appears, and because of the analogy to the occurrence of fat emboli after the subcutaneous injection of oily substances, acute anaphylactic death in man following subcutaneous injections of horse serum is probably due to an accidental intravenous injection of the serum.

The need of care, to exclude as far as possible the injury of a subcutaneous blood vessel during subcutaneous injection of horse serum is indicated.

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EDITORIALS

ETHER ANESTHESIA

It is both fortunate and unfortunate that ether is so easy of administration—fortunate in that disasters are rare in inexperienced hands, and unfortunate in that but little effort is expended in perfecting the technique of administration. It is no uncommon thing, even in many of our largest and best hospitals, to see the anesthesia entrusted to the most inexperienced. Most anesthetists have been trained in the school of practical experience alone, without ever having received adequate instruction either in the theory or the application of ether administration. In recent years the anesthetist has been fighting for recognition of his specialty as one worthy of more interest and more respect—to the very marked benefit of anesthesia in general.

A recent paper by Dr. Arthur E. Guedel, of Indianapolis, is being given extended publicity because of its value both for teaching purposes and because it calls attention to the fact that proper administration of ether is an art with innumerable shades of interpretation of the greatest nicety. He calls attention to the necessity for lighter and more even ether anesthesia, remarking that the mere knowledge that the patient is in the third or surgical stage is not now sufficient. He divides third stage anesthesia into four strata and illustrates by a schematic chart the character and significance of the changes in respiration and reflexes during these strata of the third stage. There is nothing particularly new in his discussion of the characteristics of respiration, nor indeed of reflexes save those of the eyeball. Concerning this he says:

"The eyeball offers one of the most important signs in anesthesia today. As long as the eyeball is oscillating or is in an eccentric position though stationary, there is no danger that too much ether has been given. Aside from extraneous circumstances, such as positional asphyxia, hemorrhage, or shock, if the eyeball is moving or is stationary but eccentric, the patient is safe and in good condition.

"As the patient enters the first or upper stratum of the third stage, either from above or below, there is manifest a partial paralysis

of the motor oculi muscles. Either there will be an intermittent contraction and relaxation, or variations of these, causing a rhythmical oscillation of the eyeball, or there will be a stronger tonic contraction of one set than of another, resulting in a stationary but eccentric globe. Occasionally in the alcoholic, or the individual of high reflex nervous tension, in place of the above there will occur a peculiar slight twitch of the globe, usually in a lateral direction. This twitch may not occur until from three to five seconds after the lid has been raised for inspection, therefore this inspection should not be momentary. When this twitch does occur, whether late or early, it means the same thing as above, namely, that there is only a partial and not a complete paralysis of the motor oculi muscles.

"Whether there be a rhythmical oscillation, an eccentric stationary globe, or the twitch just mentioned, the meaning is the same; the patient has not had too much anesthetic and, other things being equal, is in an ideal stage of surgical anesthesia."

The chief value of the signs emphasized by Dr. Guedel lies in the fact that they enable one to differentiate between the patient with very quiet and seemingly depressed respiration entering the fourth stage or danger zone, and the patient in the first stratum of the third stage, namely extremely light and ideal anesthesia. It goes without saying that the lighter the anesthesia the better, so long as the surgeon is not hampered by rigidity and troublesome reflexes. All trained anesthetists are familiar in a general way with this first stratum of the third stage described by Dr. Guedel and strive to carry their patient at just this depth. It is fortunate however that so admirable a description of the various characteristics of the different stages has been made so readily accessible. Dr. Guedel also calls attention to the fact that dilation of the pupil with or without morphine is an indication that the anesthesia is too deep.

While it is perfectly true that to give an anesthetic well demands that the anesthetist take note of every available sign, it is still perfectly true that after a large experience it is quite possible to control the patient and keep it in Dr. Guedel's first stratum of the third stage by watching the respiration, color and pulse alone. In the vast majority of instances the trained anesthetist will find it unnecessary to look at the eyeball, and still will have no difficulty in maintaining light surgical anesthesia. On the other hand there are times when all of the available signs must necessarily be taken into account if one is to obtain the desired result.

THE AMERICAN COLLEGE OF SURGEONS CLINICAL CONGRESS— STATE SECTIONS

It is important that the profession and the public also should know about these organizations—what they are, what they are trying to do, and how. To quote from the Year Book of the A. C. S. of the current year—"The American College of Surgeons is a society of surgeons of the United States and of Canada which aims to include within its Fellowship all who are of worthy character and who possess a practical knowledge of the science and art of surgery. The College is fundamentally concerned with matters of character and of training, with the betterment of hospitals and of teaching facilities in medical schools and hospitals, with laws which relate to medical practice and privilege, and with an unselfish protection of the public from incompetent medical service. The College was organized on May 5, 1913, in Washington, D. C., when four hundred and fifty prominent surgeons came together at the invitation of an Organization Committee which had been appointed by the Clinical Congress of Surgeons of North America at its meeting in November, 1912."

Fellowship in the College has since been extended to South American surgeons, the idea being that the membership shall be comprehensively American and include all worthy surgeons of the American Continents. On October 25, 1917, the Clinical Congress of Surgeons was affiliated with the A. C. S. and became the Clinical Congress of the American College of Surgeons.

The annual dues of the Fellows, payable January 1st, are \$25.00. Fellows who subscribe \$500.00 are exempt from dues. More than a half million dollars already has been raised for the Endowment and the desire is to raise one million as fast as possible.

The College has acquired a beautiful home in Chicago and has been presented with the library of the late Dr. John B. Murphy. To this collection has been added, through the generosity of Mrs. Murphy, the principal surgical works published during the past four years.

Fellowship in the College is open to every person who can furnish evidence that he is professionally and morally qualified to practice surgery. This evidence consists of reports as to the ethical and professional fitness of the applicant furnished by surgeons whose names are submitted by the applicant, and which evidence is attested by three Fellows of the College.

All applicants must sign before admission the following pledge: "Upon my honor as a gentleman, I hereby declare that I will not practice

the division of fees, either directly or indirectly, in any manner whatsoever."

The College is organized for surgeons and specialists, and therefore admits only those who limit their practice to surgery or specialize in that branch of practice. In order that the College may avail itself of all competent and conscientious men who are doing good surgery, it is provided that men who are doing general practice in connection with surgery may be admitted to fellowship upon furnishing evidence that they are doing enough surgery to warrant their admission. The percentage of surgery required of applicants varies to suit the particular locality of the individual applicant. An applicant in a city of fifty or a hundred thousand for instance is expected to do a much larger proportion of surgery than the applicant who lives in a city of from three to ten thousand.

Standardization of hospitals is one of the great works inaugurated by the College. The chief purpose of the College is to better the practice of surgery; surgery is an inseparable part of medicine; the hospitals are important factors in all matters of medicine, surgery and public health; therefore, under the title of Hospital Standardization, the College inaugurated an effort to improve hospital service with the aim of safeguarding "the patient against error in diagnosis, against lax or lazy treatment, against unnecessary surgical operations or operations by unskilled surgeons; it aims to bring to every patient, however humble, the highest service known to the profession."

Space and time proscribe details, suffice it to say that this work is progressing rapidly and that already over 400 hospitals have met the minimum standard—seven in Indiana. Among the requirements for the standardization of a hospital are: (1) A staff, which must hold meetings at least once a month and review and criticize the work done in the hospital; (2) No one is allowed to practice in the hospital unless he pledges himself not to divide fees or give commissions; (3) Complete records of all cases must be kept, and no operations are allowed without the diagnosis or reason for the operation is made and recorded.

The chief object of the Clinical Congress of the American College of Surgeons as originally organized was the betterment of the practice of clinical surgery, and in order that this work might be more effectual the organization of state and provincial branches was inaugurated. Thirty-eight such sectional organizations are now in existence (five in Canada and thirty-three in the United States), and it is intended to prosecute the work until all states and provinces are organized. Meetings of these Sections, like the parent organization, are held annually.

These meetings are occupied by clinics, scientific sessions and public meetings. These public meetings are of special importance, for at these meetings the laity are told by the doctors those things which the public should know in order that it may take the proper interest in all matters pertaining to the prevention and cure of disease, and, on the other hand, prominent lay men tell the profession what the public expects of them as individuals and of the organizations (hospitals, medical schools, etc.) in which they are the responsible actors. In a word these are get-together meetings benefiting both the public and the profession. Indiana held her first Section meeting at Indianapolis May 2nd and 3rd. The scientific meetings and clinics were interesting, instructive and well attended, while the public meeting, which was held in the ball room of the Claypool Hotel, filled that large room with an audience that, judging from the attention manifest, was intensely interested and hence benefited.

The American College of Surgeons is doing a splendid work in a splendid way and all surgeons worthy of the name should be Fellows. The degree of F. A. C. S. will, in the near future, mean to the American surgeon what the degree of F. R. S. means to the British surgeon.

POSTGRADUATE WORK IN INDIANA

Postgraduate courses will be offered during the coming summer by the Indiana University School of Medicine, Indianapolis, in the Departments of Medicine, Surgery, Pharmacology and Pathology.

A course will be given in Internal Medicine, with ward rounds, at the Robert W. Long Hospital, including the methods of medical laboratory diagnosis necessary for the study of patients in the wards. Clinical work in surgical diagnosis will be given; also work in Surgical Pathology. In the former case, whenever indicated at operation, the opportunity will be given to prove or disprove the diagnosis. In the work in Surgical Pathology, special stress will be laid upon gross pathology and upon the relation of the pathological condition to the clinical picture. Also the prognosis as determined by the pathological diagnosis will be discussed.

A course in biochemistry with some of the more recent chemical methods of diagnosis, including analysis of the blood, determination of acidosis, detection of diabetes and hyperthyroidism by the determination of the sugar tolerance and the basal metabolism, will be given. The work will consist of lectures and practical laboratory work.

A course in pathology, covering pathological changes in general, and those changes characteristic of the more common diseases, including various infectious diseases, cardiac, arterial, renal and glandular diseases, anemias, leukemias, neoplasms, etc., will be given. The course will occupy six weeks, with five lectures per week, followed by laboratory periods. Study will be made of the gross and microscopic features of pathological material illustrative of the changes discussed. The projectoscope will be used for demonstrating microscopic changes in the sections to be studied. Those enrolled in this course may attend all autopsy examinations made in the Robert W. Long Hospital and the Indianapolis City Hospital during this period.

A course will be given in disease production and resistance, occupying six weeks, with three lectures and three laboratory periods per week. This course will summarize the present understanding of the mechanism by which various disease manifestations are produced, and the reaction of the body to the various forms of injury. The major portion of the discussions will relate to diseases of bacterial origin, but the pathological physiology of toxemias, mechanical injuries, burns, neoplasms, and diverse other disease processes will be presented. Stress will be laid on the reaction of the body to the various forms of injury, and the relation of this reaction to the course of the disease and to symptomatology. The principles of immunity, and the application of the various serological tests and other immune reactions to diagnosis will be presented, together with the relation of serum and vaccine therapy to the mechanism of the body's resistance.

These courses will be open only to graduates in medicine and will be scheduled so as to make it possible for one or all courses to be taken within the six weeks' period beginning Thursday, June 9th. The ward rounds at the Robert W. Long Hospital will be scheduled during the morning periods on certain days of the week, alternating with laboratory periods in the courses given in the other departments. A certain amount of lecture work will be given in connection with the courses offered. Fees amounting approximately to \$25.00 will be charged for each course. This amount includes registration, microscope, laboratory material and breakage fee.

Those desiring to enroll in any one or all of the courses offered should write to the Registrar, Indiana University School of Medicine, Indianapolis, at once indicating their desire for enrollment. It is requested that enrollment be completed by June 8th. Further particulars as to the days and hours at which the work will be given, also any further information desired, will be sent on request.

EDITORIAL NOTES

Now that some of the leading statesmen have announced that Congress is not interested in Einstein's Theory of Relativity and will not pass any laws concerning it, we can sleep soundly at night.

IN so many localities in Indiana there has been a shortage of graduate nurses. We desire to call attention to the fact that we are carrying the advertisement of the Central Registry for Nurses in Chicago, through which graduate nurses may be secured at any time.

THIS year's annual session of the A. M. A. will be held in Boston June 6 to 10, and the Boston medical men have arranged for clinics before and after the session. The clinic feature ought to be a great drawing card, for there is no other place where material and instruction is better.

HAVE you noticed that the patient who has the finest room in the hospital, a trained nurse, often when the latter is not really needed, and exacts the most attention is the one who pays the doctor little or nothing? Of course the doctor is a philanthropist and is ever charitable, but sometimes we are inclined to believe that he is justified in refusing to be made the "goat" for a lot of people who expect to receive but give nothing in return.

FOR several months the chiropractors have been occupying the front advertising pages of our daily newspapers, but now that there is a lull, Christian Scientists are coming back with their publicity campaign. This advertising game is a profitable one for the lay press, and as commercial gain is the desired end of most newspaper editors and proprietors we are not surprised that medical advertising, fraudulent or otherwise, is accepted so eagerly by the average newspaper.

THE lay press has much to say concerning declining prices, but we have noticed no change in most of the articles required in the practice of medicine. Surgical instruments and appliances always were outrageously high, and the exorbitant prices tacked on during the war still stick. There are some surgical specialties for which there is little demand and that only short lived, which perhaps justify fancy prices, but there are many staple articles the prices for which at the present time are absurd.

CONCERNING the growth of medical quackery during the last two or three years, we are inclined to believe that a cause may be found in

the air of prosperity that prevailed during and immediately following the war. When everyone has money and it comes easy, wild and foolish expenditures are to be expected. The present financial depression and rather general stagnation of business is producing a marked change in the attitude of most people as pertains to the selection of their medical advisers and the kind of treatment that is to be administered for their ills. With less to pay with and a desire to make the money go farther, people are more particular in the selection of a medical adviser.

PHYSICIANS do more charity work than any other class of people and yet every soliciting committee, trying to get funds for any charitable or benevolent purpose, picks out medical men for those first to be called upon and expresses surprise if not indignation if each doctor solicited does not respond with a donation that would do credit to the richest man in the town. Generally the doctor does respond liberally at considerable sacrifice, and scant credit is given him for his generosity. Except for the fact that it might be considered bad taste to do so, it would not be a bad idea for doctors to keep a record of the amount of charity work they do, and call attention to it when some of the insistent soliciting committees are trying to browbeat the doctor into giving more than he can afford.

As an evidence of how we can be deceived in our estimate of the value of certain remedies as a direct result of the manufacturer's advertising and extravagant claims, we desire to call attention to what has been said concerning benzyl benzoate in *The Journal of the A. M. A.*, April 30, 1921, an abstract of which appears in this number of THE JOURNAL under the department The Truth About Medicines. Benzyl benzoate no doubt has an anti-spasmodic action, and probably has a sphere of usefulness in certain diseased conditions, but it would seem that the claims for its efficiency in this respect are somewhat extravagant and exaggerated. This is another reason for supporting the work of the Council on Pharmacy and Chemistry which is analytical and unprejudiced, and scientifically trustworthy.

THE University of Virginia has a campaign on to save doctors. The argument is that the title of doctor belongs exclusively to one who practices the medical profession, and should not be used by a man who mixes fizzes or takes rabbits out of a plug hat. Even the musician who plays the cathedral organ or the man who runs a hospital for canaries is not to be called a doctor if the University has its way. In Germany they are apt to call almost any highbrow

a doctor, but they musn't do so in this country any longer. It may be permitted to call the leader of the jazz orchestra a professor, but he is not to be mentioned as a doctor. A doctor is a man who carves the human frame, or writes you a prescription for hotch. He is not one who plays the concertina or does tricks with cards. Little children must remember this.—Exchange.

THIS year's session of the American Medical Association, which will be held in Boston June 6 to 10, should be especially interesting to all members of the medical profession. The last year the Association met in Boston the session was one of the most successful ever held, and there is no reason why the coming session should not prove equally successful. The programs are very promising, and the attendance of quite a large number of confreres from abroad will add to the interest. The expenses of attending the session will be greater than the expenses of attending any previous session of the Association, for the reason that railroad fares and hotel expenses have taken a decided jump, but as doctors for the most part have participated in the general prosperity of the past year or two, probably the increased expense will not prove to be a serious objection.

A REPRESENTATIVE of an eastern manufacturing pharmaceutical house is doing some detail work among physicians in Indiana, and everywhere, when asked concerning the approval of his preparations by the Council on Pharmacy and Chemistry of the A. M. A., he makes the statement that he never has heard of the Council, and doubts if his firm (which is a very old and well established one) knows that there is such a thing. He seems exceedingly interested in the matter, and requests the specific name of the Council, where it is located, etc., making a penciled note of the data. We have every reason to believe that this is a studied attempt to belittle the work of the Council, and probably the agents are inspired by the parent house to assume this attitude. Let no doctor be deceived by such conduct. We believe that any firm attempting such tactics should be given no consideration of any kind whatsoever.

THE Presbyterian Board of Foreign Missions, 156 Fifth Avenue, New York, has sent out a call for a qualified physician for missionary work in China. They desire a Christian physician, not above thirty-five years of age, with a knowledge of psychiatry, or willing to spend a year or two in special preparation for practice among the insane in China. The work already has been established at Canton, China, with a hospital

caring for about one hundred patients. The physician does not necessarily need to be a Presbyterian but any Christian physician who measures up to the specifications of the Presbyterian Board, and who has a desire to help a needy people and willing to undertake this special task in China, will be acceptable. This is a splendid opening and presents an unlimited opportunity to some energetic young physician. If interested, write Walter I. Clarke, Publicity Director for the Presbyterian Church, at the above address.

ACCORDING to a recent newspaper clipping "the sum of \$500,000 has been given by Drs. Schamber, Kolmer and Raizis to the Dermatological Research Laboratories for the support of medical research." The clipping states further that the amount represents the profits received during the war from the sale of the arsphenamin which was manufactured—first as a wartime necessity and later as a licensed preparation—at the Dermatological Research Laboratories, under the control of these men. When it is recalled that the drug was sold at about one-third the pre-war price of "salvarsan" of German make, and also that the drug was prepared during the economic conditions attendant on the war, the vastly greater toll collected by the German proprietors at the time they controlled the sale of "salvarsan" may be easily calculated. It is indeed to the credit of the American workers that their gains—modest in comparison to those of the Germans—have been dedicated to altruistic purposes.—*Jour. A. M. A.*, March 22, 1921.

SOME of the doctors who regularly attend the annual sessions of the A. M. A. and who as regularly procure their hotel reservations many months in advance, have been rudely shocked as early as January of this year to learn through the Hotel Committee of the American Medical Association that accommodations at the leading Boston hotels are unavailable for the first week of June on account of being sold out. This seems to be a regular condition of affairs since the A. M. A. has taken charge of the hotel reservation arrangements in the various cities where the regular sessions are held. Heretofore it may have been that hotel reservations were scarce a few weeks before the date of the annual session, but there never has been any difficulty in getting assignments several months beforehand. Inasmuch as investigations are the order of the day, perhaps it might be well to know why the Hotel Committee is unable to make hotel reservations six months in advance of an annual session. Can it be possible that reservations are held for the elect?

ACCORDING to a letter written by an Austrian physician, who recently has returned from Russia, and published in the *Vienna Allgemeine Zeitung*, private medical practice has been forbidden in Russia. He says that the final step in the transformation of medical practice into a state function has been taken recently by the soviet government. This prohibits private practice by physicians. This was the last private business still permitted, as arrangements had to be made for free dispensaries at available points. The physicians living near the dispensaries are given charge of them, at a fixed salary. The sanatoriums and private hospitals had been taken early for the purpose, retaining their former proprietors as directors. The writer adds, "The middle classes whose fate in all socialistic movements is to be ground between the millstones of capital and labor, have simply been ground out of existence, or crushed down into the proletariat. The forbidding of private practice now consequently has scarcely any significance for the physicians of Russia."

SOME of the members of our association evidently like to see their names in the public press in connection with cases that have been treated or operated. As an evidence of this we have been furnished clippings in which the name of one prominent doctor is mentioned five times within two days and we are told that the record is little better for several weeks. When any doctor's name appears regularly or even frequently in the daily papers in connection with cases, it is a safe bet that the doctor courts that sort of publicity. There is no excuse for it, and as we often have said before, there isn't a newspaper in Indiana that will not refrain from publishing the name of any doctor in connection with cases if so requested. We suggest that the secretaries of county medical societies keep a scrap book and clip all of these personal notices and insist upon an explanation. Furthermore, it wouldn't be a bad idea if every county medical society in the State passed a resolution conveying a request to the local newspapers to the effect that no doctor's name be published in connection with medical or surgical cases without consent.

AN example of German nerve is narrated in the April issue of *Northwest Medicine* when the editor tells of his desire to subscribe for a couple of German publications, the "Wiener" and the "Berliner Klinische, Wochenschrift," and was advised by an eastern dealer in foreign books not to subscribe for either at the present time. The book dealer stated that the Germans discriminate in prices to all outsiders. For instance, for a periodical costing in Germany 16 marks, publishers have the nerve to ask 850

marks from the American subscriber, this amount to be paid in advance. The excuse for this discrimination is "equalization of exchange" and for this purpose he adds 750 percent to the price of the publication. One incident was given where an American customer was willing to pay this profiteering price, but after the German publisher had received the sum demanded, he sent an additional bill. The customer refused to pay this additional sum, and the thrifty German retained the money already sent him without furnishing a single copy of the publication in question. Such is an example of the German nerve in the disguise of poverty and oppression by the conquerors.

INTRAVENOUS medication is receiving a great deal of advertising, and as a direct result of the exploitation of certain preparations that are extravagantly advertised as especially indicated for intravenous use, many doctors are being led to adopt a procedure that is not only of questionable value but may prove dangerous. Our objection to the intravenous solutions that at present are being advertised so extensively by certain pharmaceutical houses is that the remedies are sold under misleading claims regarding their alleged safety and efficiency. In this connection we desire to condemn the practice of accepting without further proof the statements and conclusions of interested pharmaceutical houses concerning the reliability and efficiency of any of their products. If what they say is true, then they should be quite willing to have their preparations passed upon by the Council on Pharmacy and Chemistry of the American Medical Association. On the other hand, failure to receive the approval from such a source should lead the medical profession to believe that there is something radically wrong with those preparations, and under such conditions the preparations should not be employed until they have received the Council's approval.

WE have had many complaints concerning collecting agencies and wish to warn our readers against placing accounts with any collecting agencies unless unquestioned evidence as to trustworthiness and fairness can be obtained, and we confess that we believe that there are few agencies that can furnish such evidence. The average collection agency, if not fairly close to a fraud, is looking for the major portion of collections made, and often times gets the doctor into such bad repute with debtors that the collection of the account becomes a very costly procedure. A good live office girl with a systematic follow-up system can accomplish wonders for the average doctor in the way of collecting accounts, and what cannot be collected in that way usually can be collected by some

young, active and thoroughly trustworthy attorney in the immediate locality. However, of most importance is the establishment of the habit on the part of the doctor in sending out monthly statements to any and all debtors, and following up with repeated statements in case the account is not paid or some arrangement is made for payment in the early future. Procrastination in presenting bills is what loads up the doctor's ledger with uncollectable accounts.

DOCTORS should be a little shy of collecting agencies if they desire to avoid unpleasant complications. Perhaps the average doctor places nothing but "deadbeat" accounts with collecting agencies, and really doesn't care what happens, or for that matter whether the account is ever collected or not. The possibilities of getting into serious embarrassment should not be overlooked, for not infrequently the collecting agencies take unfair advantage of their position and place the doctor in an embarrassing position through misrepresentation. Not infrequently the doctor is made the victim of an unfair advantage through some such joker as follows:

"In the event the undersigned should withdraw any claims after having assigned the same to said association, the commissions thereon shall be paid to said association the same as if said association had collected such claims in full."

It is all right to protect the collecting agencies from withdrawal of accounts immediately after pressure has been brought to bear upon the debtor which results in payment direct to the doctor, but the doctor is not protected if after a suitable length of time there are no results obtained by the collecting agencies and it is desired to place the accounts in other hands for collection. There is no occasion for making a contract that is one-sided in its protection.

EVERY now and then doctors are visited by representatives of various pharmaceutical houses offering a list of proprietary remedies for which they make extravagant claims, but when asked concerning the acceptance of these proprietaries by the Council on Pharmacy and Chemistry, with a superior air announce that the firm they represent is so old and well established that it is unnecessary for them to submit any of their products for approval. We desire to remind doctors that these "old, established firms" bear watching just as much as the newer ones. No matter how well established a firm may be, experience has shown that each and every one of them have taken advantage of the medical profession at various times and given extravagant and even false information and recommendations concerning some of their products.

The Council on Pharmacy and Chemistry is a large body of clinical and laboratory workers, representing the best element in the medical profession, with no commercial or financial ends to be attained. Their recommendations are entirely trustworthy, and should be followed by the medical profession at large. In fact the Council is the only clearing house which enables medical men to know to a certainty what they are using in the way of pharmaceutical specialties, and it is up to Indiana doctors to refuse to accept samples or to recommend in any way drugs or pharmaceuticals which have not had the approval of the Council on Pharmacy and Chemistry.

A FEW weeks ago we heard of a death occurring just preceding a proposed operation under a local anesthetic, the death being attributed to angina pectoris according to the death certificate. No autopsy was held, and the question arises as to whether the reported cause of death was correct or not. On inquiry it was learned that the attending physician, a careful, experienced and competent surgeon, exhibited a hesitancy about investigating the case because the patient had come to him after consulting a rival confrere who made capital of the fatal result. Inasmuch as it is more than probable that not the slightest criticism could be offered as to the conduct of the case, it seems to us that these sudden and inexplicable deaths should be investigated from a scientific standpoint with a view to helping us to avoid similar occurrences. While there are individual idiosyncracies and perhaps rarely an instance where a very limited amount of novocain may prove unusually toxic, yet we must not forget that status lymphaticus, the psychic element, and overlooked pathologic conditions may be directly or indirectly responsible for the death. Only a carefully conducted autopsy would determine these points, and in the interest of scientific advancement we ought to determine the truth. On the other hand, perhaps a certain amount of sympathy should be extended to any doctor who has a sudden death on his hands occurring during some treatment or operation that ordinarily is considered perfectly safe, when we consider the damage that comes from unfair criticism of confreres or the public.

An interesting hospital agitation has been excited recently in Spokane, Washington, on the part of the drugless healers, according to an editorial in *Northwest Medicine*. It seems that certain members of the medical profession of Spokane started the disturbance by receiving surgical cases from chiropractors and inviting them to be present during the operative procedures.

Thereupon the visitors demanded that they be accorded accommodations in the hospitals for their patients, the same as all other doctors, which privilege was promptly denied them. Of course the drugless healers protested loudly and long through some of the city newspapers, proclaiming the injustice to the suffering public whose unfortunate sick were being deprived of the privilege of receiving drugless salvation in the hospitals of the city. What a farcical situation is here presented! The basis of modern standardization of hospitals is an insistence on scientific knowledge in medical and surgical principles on the part of those who practice in the hospitals. This fact should be widely proclaimed when these half-baked and uneducated drugless practitioners shout from the house tops that they are being discriminated against. There is only one condition to be demanded of all who treat the sick, and that is that all should have an equal scientific education in the accepted basic principles concerning the human body in health and disease. If these facts are continually presented to the public, such outbursts as have recently occurred in Spokane will be estimated at their true value.

THE 72nd annual session of the American Medical Association will be held in Boston from Monday, June 6, to Friday, June 10. The House of Delegates will convene on Monday, June 6. The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, June 7, at 8:30 P. M. The various sections of the Scientific Assembly will meet Wednesday, June 8, at 9:00 A. M. and 2:00 P. M. and subsequently according to their respective programs.

The Sections convening at 9:00 A. M. are as follows:

Practice of Medicine.
Obstetrics, Gynecology and Abdominal Surgery.
Laryngology, Otology and Rhinology.
Pathology and Physiology.
Stomatology.
Nervous and Mental Diseases.
Urology.
Preventive Medicine and Public Health.

The Sections convening at 2:00 P. M. are as follows:

Surgery, General and Abdominal.
Ophthalmology.
Diseases of Children.
Pharmacology and Therapeutics.
Dermatology and Syphilology.
Orthopedic Surgery.
Gastro-Enterology and Proctology.
Miscellaneous.

The officers of the American Medical Association for 1921 are as follows: William C. Braisted, President; Alexander R. Craig, Secretary; Dwight H. Murray, Speaker, House of Delegates.

Now that the Indiana legislature has adjourned we feel free to comment on some phases of the effort to improve medical and public health laws. One of the surprising things was the attitude of some fairly well known medical men in openly opposing bills having the approval of the Legislative Committee of the Indiana State Medical Association. For instance, quite a few members of our Association opposed the bill requiring the registration of all physicians and the payment of a license fee of \$2 per year. In practically every instance the opposition was found to be due to the selfish and penurious attitude of a few doctors who put dollars above every other consideration, and who are not willing to put themselves to the slightest inconvenience in upholding a measure that means the improvement of conditions under which medical men practice.

Another peculiar feature that developed in the fight to keep the chiropractors from being recognized as a distinct school of medicine, was the sympathy and the support afforded by a few human skunks who belong to the regular medical profession but who hope to profit through chiropractic influence in seemingly upholding them in their demands for legal recognition. Of course we recognize the need of a good housecleaning in our regular medical profession, and it is a pity that we hold on our membership rolls so many men who are a disgrace to the profession. Just why we tolerate the undesirables is a question that can be answered on no other ground than that as a profession we are weakened when it comes to taking a stand that may prove to be somewhat disagreeable for us.

THERE are probably a few homes in this country in which commercial borax—sodium borate—is not used both for household purposes and as a medicine. It is rather startling, therefore, to hear of a death caused by this ordinarily innocuous substance. In the case reported by Dr. Caryl Potter in a recent issue of *The Journal of the American Medical Association*, death occurred three hours after the patient had taken an ounce of borax. Schwyzer, in 1895, recorded a fatality following the ingestion of one-half ounce. In several other instances, quantities of one-half ounce or more are said to have been taken as an abortifacient, followed, however, by recovery. The symptoms observed in Doctor Potter's case confirm those found in the few cases on record:

gastro-intestinal irritation, manifested by salivation, nausea, vomiting, colic and diarrhœa; collapse, and death. Urinary phenomena are usually prominent (albuminuria, hematuria, casts, vesical spasm). These are not described in the present case, perhaps because the course was too rapid. Delirium, visual changes, and skin eruptions are also of rather common occurrence. The absence of gross necropsy lesions agrees with the usual findings. It indicates that the toxicity depends on systemic action. The symptoms in this case suggest asphyxia by swelling of the bronchial or laryngeal mucosa, an action analogous to the borax urticaria of the skin that has been observed in other cases. This would account for the unusually rapid course. The absence of such edema in other cases may explain the recovery of the patients from equally large doses. Dr. Potter raises an interesting question, i.e., the better instruction of the laity in the possible dangers of substances—used freely in the household—which are on the borderline of poisons. Such substances as borax, boric acid, Epsom salt, lime, washing soda, or even soap, are quite harmless in their respective fields, but become sources of serious danger when they are misapplied. It is doubtful whether such substances should bear a "poison" label. It may be more practical to require a "caution" label bearing a general statement that the substance, when swallowed in excessive amount, is liable to produce serious effects; or, in the case of caustics, that they injure the eyes.

DEATHS

H. L. LAMAR, M.D., Rockport, died April 7, aged 71 years.

J. K. BAXTER, M.D., Sharpsville, died March 27, aged 89 years.

CORA MABEL SLUSS, wife of Dr. John W. Sluss, of Indianapolis, died April 11, aged 51 years.

GEORGE E. SQUIER, M.D., Brookville, Indiana, died February 28, aged 76 years. Dr. Squier graduated from the Eclectic Medical Institute, Cincinnati, in 1882.

CHARLES M. BROWN, M.D., of New Marion, died at the home of his daughter near Titusville, April 6, aged 83 years. Dr. Brown was a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, class of 1879.

JAMES W. DICKERSON, M.D., died April 5, aged 68 years. Dr. Dickerson graduated in medicine from the American Eclectic Medical College at Cincinnati in 1893 and had practiced medicine in Wingate for over 26 years.

CHARLES L. WRIGHT, M.D., of Huntington, died April 2 from an overdose of opium. Dr. Wright was 59 years of age and graduated in medicine from Rush Medical College, Chicago, in 1886. He was a member of the Huntington County Medical Society, Indiana State Medical Association and the American Medical Association.

FREDERICK W. SAUER, M.D., Hammond, died March 23 from pneumonia, aged 32 years. Dr. Sauer graduated from the University of Michigan in 1902. He was local surgeon of the Lake Shore & Michigan Southern and Indiana Harbor Railroads, and was a member of the Lake County Medical Society and the Indiana State Medical Association.

NEWS NOTES

DR. JOHN B. SHIPLEY, of La Paz, has removed to Andrews for the practice of medicine.

DR. A. C. CHENOWETH of Bluffton was married on April 9 to Mrs. Edith Canter of Pennville.

A NEW children's hospital is to be erected at the Bohne Anti-Tuberculosis Camp near Evansville.

THE 33d annual meeting of the American Pediatric Society will be held at Swampscott, Massachusetts, June 2 to 4.

DR. B. B. THORPE, formerly of Earl Park, more recently of Roann, has returned to Earl Park for the practice of medicine.

THE Massachusetts Anti-Vaccination Bill was killed in the House by a vote of 21 to 100 after having passed the Senate by a vote of 20 to 15.

DR. G. W. CAMPBELL has sold his interest in the medical firm of Campbell & Campbell of Winamac to Drs. C. S. Campbell and T. E. Corneal.

MISS LAURA LOWE, of Indianapolis, has been employed as superintendent of the Bartholomew Hospital at Columbus, succeeding Miss Louise Hlatt.

A RECENT report from Spain states that the physicians of Avila declared a general strike because the authorities refused to increase their salaries.

THE annual convention of the Catholic Hospital Association of the United States and Canada will be held June 21 to 24 at St. Paul, Minnesota.

DR. J. C. FLEMING, of Elkhart, has associated with him in the practice of medicine Dr. H. C. Schlosser, late resident physician of St. Anthony's Hospital, Chicago.

DR. HUBERT WORK, President of the American Medical Association, was given a recess appointment by President Harding on March 28 as First Assistant Postmaster-General.

THE annual conference of the American Hospital Association will be held at West Baden Springs Hotel, West Baden, September 12 to 17. Reservations for 1200 members have been made.

DR. ALFRED HENRY, of Indianapolis, addressed the Sullivan County Medical Society at its regular monthly meeting on April 6, his subject being, "The Diagnosis and Treatment of Tuberculosis".

DR. F. J. BECK, who gave up his practice at Hartsville when he enlisted in military service and who has been practicing in Indianapolis, has returned to Hartsville, purchasing the practice of Dr. E. A. Porter.

DR. J. WILLIAM WRIGHT announces that Dr. Kenneth L. Craft is now associated with him in the practice of rhinology, otology and laryngology, with offices at 610-611 Hume-Mansur Building, Indianapolis.

THE American Association of Anesthetists will meet at the Hotel Bellevue, Boston, June 6 and 7. Among the papers on the science and practice of anesthesia will be a symposium on anesthesia in obstetrics.

SURVEYORS began work on April 12 on the new \$100,000 Decatur County Memorial Hospital. This hospital is to be erected by the county as a memorial to the soldiers, sailors and marines of the late war.

THE date of the annual meeting of the American Laryngological, Rhinological and Otological Society, to be held at the Hotel Chelsea, Atlantic City, New Jersey, has been changed from June 1 and 2 to June 3 and 4.

DR. A. C. CHENOWETH, who has been a member of the medical firm of C. E. Caylor and Chenoweth, has severed his connection with the firm and gone to Chicago where he will take up postgraduate work in eye, ear, nose and throat.

SANTA ANA and West Santa Ana, California, recently have suffered a smallpox epidemic. The spread of the disease as reported by the health officer of that city was in a large measure due to the failure of certain chiropractors to recognize the disease.

DR. C. H. ENGLISH of Fort Wayne, Medical Director of the Lincoln National Life Insurance Company, was elected president of the Medical Section of the Life Underwriters at the annual national meeting held recently at Excelsior Springs, Missouri.

AILEEN M. KIME, only daughter of Dr. and Mrs. John T. Kime of Petersburg, died in the Orange General Hospital, Orlando, Florida, April 25. She had been visiting the families of her uncle, Dr. R. R. Kime, and cousin, C. D. Kime, at Orlando.

THE Public Health Nurses' Association of Indiana held a conference at Indianapolis on May 10 to 12 in conjunction with the annual school for health officers conducted by the State Board of Health. Approximately 100 nurses were in attendance.

DR. J. E. HIATT, formerly of the Newcastle Clinic, Newcastle, Indiana, was the guest of honor at a banquet given by the physicians of Newcastle on March 31. Dr. Hiatt has located at San Antonio, Texas, where he will continue to practice medicine.

RADIUM valued at \$13,000 was thrown away by a woman patient in the Faxon Hospital, Utica, New York, who did not appreciate its value. The radium was the property of Dr. George M. Fisher and was being used to treat a cancer of the woman's breast.

THE *American Journal of Tropical Medicine* is the name of a new medical journal to be published bi-monthly by the American Society of Tropical Medicine. H. J. Nichols, Medical Corps, U. S. Army, Army Medical School, Washington, D. C., is the editor.

AT the annual meeting of the Third District Medical Society held at New Albany on April 8, the following officers were elected for the ensuing year: President, Dr. A. L. Mitchell, Salem; Secretary, Dr. Claud Paynter, Salem; Councillor, Dr. W. J. Leach, of New Albany.

PROFESSOR GUSTAVE KILLIAN of Berlin died February 24 after a prolonged illness. Professor Killian was a leader in the field of laryngology, being the first man to make direct examinations of the larynx, trachea, and bronchi by means of specially devised instruments of his own invention.

SEVENTEEN nurses of the Lutheran Hospital Training School for Nurses, Fort Wayne, received their diplomas at the annual commencement exercises held May 6 at St. Paul's auditorium, Fort Wayne. Dr. Garrett Van Sweringen of Fort Wayne and Rev. Eggers of Seymour, Indiana, were the principal speakers.

THE Medical Research Laboratories at Mitchell Field, Mineola, Long Island, were destroyed by fire on March 19. One of the most complete and valuable x-ray equipments in the country including apparatus for testing the heart and lung action in various atmospheric densities, and many war aviation records, were totally destroyed.

DR. ADA McMAHON, of Lafayette, has been appointed by Governor McCray as the first woman member of the Indiana State Board of Health. Dr. McMahon succeeds Dr. Frederick Henshaw of Indianapolis, whose term expired March 1, 1921. Dr. Hugh A. Cowing of Muncie, whose term expired April 14, was reappointed.

THE United States Public Health Service will ask Congress at its special session for \$200,000 to improve and equip the quarantine station at New York City. The in-rush of immigrants to the United States during the past year has made the facilities for examining and fumigating persons passing through this station wholly inadequate and much delay has been experienced in handling immigrants.

DR. FRED E. JACKSON, who for the past ten years has been connected with the City Dispensary at Indianapolis, left April 23 for England where he will spend the summer in hospital work and postgraduate study. He plans to specialize in children's diseases and diseases of the chest, pursuing his studies at the Great Ormond State Hospital for Sick Children and the Brompton Chest Hospital, London.

MIGRATION of the country physician to the city has stripped many rural parts of the Eastern and Middle West states of medical men. A bill was recently presented before the Massachusetts

Legislature to permit any town which has no doctor to appropriate money to induce a physician. Several towns have voted to guarantee a \$5,000 income to obtain a physician.

A NEW modern Maternity Department has been added to the St. Edward's Hospital at New Albany. This addition was erected at a cost of \$30,000, and contains twelve rooms with private baths, and all of the most up-to-date equipment required for obstetrical work. The institution now has a capacity of 130 to 140 beds, and recently the entire hospital has been renovated and redecorated. A formal opening was held on April 26.

A UNIFORM fee bill was adopted by the Howard County Medical Society at its meeting of April 1. The fee bill is as follows: Office consultation (minimum), \$1. An extra charge will be made for medicine dispensed. Office examination (minimum), \$2 to \$5. Day visit (minimum), \$2.50. Night calls (7 P. M. to 7 A. M.), \$3. Calls outside city, each additional mile, \$.50. Consultation \$10. Confinement (minimum), \$25. Anesthetics (general), \$10.

THE Southern Health Laboratory Association was organized at Atlanta, Georgia, on March 16 for the purpose of securing uniformity of methods and procedures among the public health laboratories of the Southern States. Representatives of health departments in seven southern states were present at the organization meeting and officers were elected as follows: President, Dr. Clarence A. Shore, Raleigh, North Carolina, and Secretary, Mr. T. F. Sellers, Atlanta.

DR. WILLIAM IRONSIDE BRUCE, physician to the Roentgen-Ray and electrical departments of the Charing Cross Hospital, London, England, died recently after an illness of two months from a severe form of aplastic anemia. This form of anemia, it is said, is due to the injurious effect on the blood forming tissues from the more penetrating rays derived from the Roentgen-Ray tube or from radium. Doctor Bruce, therefore, is another martyr to the Roentgen-Rays.

THE Medical Department of Columbia University announces a course in cancer research during the summer session to be held at the Crocker Laboratory, 1145 Amsterdam Avenue, New York, under the direction of Professor W. H. Woglom. The presenting of this course

has been stimulated by the approaching visit of Mme. Curie and by the progress in experimentation reported by Dr. Francis Carter Wood, Director of the Crocker Laboratory. The course will deal with the morphology and biology of tumors.

Modern Medicine, a monthly magazine of medical and health progress for physicians and for others interested in administrative industrial and social health problems, in its third year of publication under the editorship of Drs. Alexander Lambert, S. S. Goldwater, and John A. Lapp, at Chicago, Illinois, is to change its name with the May issue to *The Nation's Health*. The change is being made in order to make the title more clearly descriptive of the present scope and new and greatly enlarged service of the magazine in health promotion and conservation.

THE Victor X-Ray Corporation announces that beginning April 1 a new arrangement went into effect governing the distribution of factory products, and service in connection therewith, in the State of Indiana. Mr. M. C. Olson has been made territorial sales distributor, with headquarters at 917 Fletcher Savings & Trust Building, Indianapolis, and assisting him is a corps of competent men, factory representatives who have had thorough and practical training in the factory and who are efficient in giving service quickly and intelligently to users of Victor x-ray and physical therapy apparatus.

DURING April the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Armour & Co.:

Suprarenalin Solution—Armour.

The Diarsenol Co.:

Silver Diarsenol.

Silver Diarsenol 0.05 Gm. Ampules.

Silver Diarsenol 0.1 Gm. Ampules.

Silver Diarsenol 0.15 Gm. Ampules.

Silver Diarsenol 0.2 Gm. Ampules.

Silver Diarsenol 0.25 Gm. Ampules.

Hynson, Westcott & Dunning:

Mercurochrome—220—Soluble.

Infections and Their Present Methods of Treatment," Dr. W. H. Williams, Lebanon; "Diagnosis and Treatment of Surgical Lesions of the Abdomen," Dr. Allen B. Kanavel, Chicago; Discussion of Above Paper, Dr. Charles Elliott, Chicago; "The Clinical Diagnosis of Incipient Tuberculosis of the Lungs," Dr. Fred Tucker, Noblesville. A banquet at the Hotel Lahr at 6:30 followed the scientific meeting.

IN view of the fact that 650 physicians, nurses, social workers and clinicians attended the Institute on Venereal Disease Control and Social Hygiene, held recently by the Public Health Service, thus indicating the desire for more training along this line, the Service proposes to conduct a general Public Health Institute to take place during the Fall of 1921. The Institute is to consist of from 25 to 30 courses, including diagnosis and treatment of tuberculosis, nutrition in health and disease, sanitary engineering, clinical nursing and social work, clinical management, courses in syphilis and gonorrhea, mental hygiene, industrial hygiene, child hygiene, vital statistics, laboratory diagnosis, health centers and various courses in psychology and sociology. The Institute faculty will be composed of 75 to 100 leading authorities, including William H. Welch, William H. Park, John A. Fordyce, Valeria H. Parker, John H. Stokes, M. H. Rosenau, Michael M. Davis, Jr., William A. White, Anna Garlin Spencer, Irving Fisher, C. V. Chapin.

SINCE 1917 at the request of the French Government, the American Committee for Devastated France, Inc., has administered emergency relief in 200 villages and hamlets in the district of the Aisne. In these villages, which were first systematically destroyed by the Germans and subsequently fought over, aid has been given to the returning inhabitants who have been provided with the necessities of life, with live stock, farming utensils and seed. A hospital with public clinics in various localities, schools and workshops also have been established; and above all, the much needed moral support has been given. The work, carried on by 125 self-supporting volunteers, is now roughly divided into two departments, Public Health and Agriculture, and is carried on under the financial control of the Banque de France, which reports the overhead expense at the low figure of only 8 percent. M. Tardieu, the honorable president, has appealed to this committee to continue its activities, as he feels that the departure now would do much harm. The work of this committee is fully endorsed by a large number of the leading physicians and surgeons of America, who also are urging its continuance.

THE annual meeting of the Ninth Councillor District of the Indiana State Medical Association was held Thursday, May 12, at Lafayette, under the direction of Dr. William R. Moffitt, Councillor; Dr. J. W. Hadley, President, and Dr. C. B. Kern, Secretary. The following scientific program was carried out: Address of Welcome by Mayor George R. Durgan; "Puerperal

SOCIETY PROCEEDINGS

		110 PERCENT CLUB			
No.	County	Secretary	1920	1921	
1.	St. Joseph.....	R. B. Dugdale	75	85	
2.	Franklin	E. M. Glaser.....	8	10	
3.	Adams	L. E. Somers.....	11	14	
4.	Carroll	Eva N. Kennedy	20	23	
5.	Hendricks	W. T. Lawson.....	16	19	
6.	Kosciusko	W. B. Siders.....	26	32	
7.	Lawrence	F. S. Hunter.....	21	26	
8.	White	H. B. Gable.....	10	11	
9.	Jasper-Newton	O. E. Glick.....	24	27	
10.	Orange	J. I. Maris.....	16	19	
11.	Owen	Allen Pierson.....	9	11	
12.	Wabash	Earl J. Cripe.....	26	30	
13.	Pike	S. R. Clark.....	12	13	
14.	DeKalb	M. E. Klingler.....	20	26	
15.	Washington	Irvin Huckleberry.....	5	13	
16.	Clark	Austin Funk.....	2	17	
17.	Clay	H. L. Hirt	17	19	

JOHNSON COUNTY

The Johnson County Medical Society met in regular session on March 13, at Whiteland. Due to the resignation of Dr. L. K. Phipps as president, Dr. J. N. Record was elected to fill the vacancy, and Dr. J. V. Baker was elected vice-president in Doctor Record's place.

The society took a decided stand against chiropractic deception, and voted to ask the American Medical Association to formulate such plans as will combat the rapid spread of the deception.

Dr. L. L. Whitesides of Franklin, an active member of the society, is very ill from influenza, having been out of his office since the summer of 1920. However, his case is reported hopeful.

Adjourned.

LUKE P. V. WILLIAMS, Secretary.

TIPTON COUNTY

At a meeting of the Tipton County Medical Society on March 15 the following resolution was passed:

"Inasmuch as the bill for re-registration was defeated by our last legislature,

"RESOLVED—That our State Medical Society dues be increased to an amount so that a reserve fund may be created, sufficient in quantity and for the purpose of fighting all illegal practice of the healing art. Said fund to be placed in the hands of the Board of Medical Registration and Examination."

The Tipton County Medical Society feels that this proposition ought to be considered (or some other way, if better) so that this fund may be raised.

L. M. REAGAN, Secretary.

UNION COUNTY

The April meeting of the Union County Medical Society was held at the Hotel Corrington, Liberty, in the form of a six o'clock dinner, with every member present. Following the dinner, there was a round table discussion of interesting cases and unique situations confronting the country doctor.

The Union County Medical Society reports a 100 percent attendance at practically every monthly meeting, and an unusual spirit of cordiality and friendship among the members.

The members of the local society were hosts to the Union District Medical Society at their annual meeting on April 28. More than a hundred physicians from eastern Indiana and western Ohio were present. Dr. O. E. Muns of Oxford, Ohio, is president, and Dr. E. E. Holland of Richmond, secretary.

E. R. BEARD, Secretary.

TIPPECANOE COUNTY

Pursuant to a motion adopted at the last meeting, this Society invited the public to an open meeting held at the Central Y. M. C. A. on February 22, to

discuss the local milk situation. About two hundred interested citizens, representing the producers, the distributors, and the consumers, were present.

The meeting was presided over by Secretary Reser, who stated the object of the meeting and introduced the first speaker of the evening, Dr. R. A. Craig of Purdue, who showed stereopticon views of tubercular cattle; following this by views of dairy barns—first a view of a modern, model dairy barn, and in contrast pictures of objectionable dairy barns, a type that could be easily found a few years ago.

The second speaker was Mr. Stainsby, an inspector under the supervision of the State Board of Health, who had been reported to the Society as having found very objectionable milk conditions existing in Lafayette at the time of his inspection in December, 1920. However, when called upon at this meeting he gave a clean bill to every distributor, and lauded the principle of pasteurization, this report being absolutely contradictory to his report of last December.

Dr. Roy Walker, city milk inspector, reported that frequent tests of milk on sale in the city had been made at Purdue, and as far as chemical analysis could determine, the milk was practically within the law. This report was based on inspection of the only three independent dairies who were delivering their products in this city, which, according to his statement, were the only dairies he was expected to inspect.

Dr. H. E. Haskins, representing the U. S. Department of Agriculture, spoke concerning the known possibility of bovine tuberculosis being capable of transmission to human beings, and strongly advocated the treatment of all cattle with tuberculin.

Prof. C. R. George of the dairy extension department of Purdue University said the local milk situation was in many respects the same as in many other cities. He said that Lafayette should have better milk, and more of it, but that the price to the producer was inadequate to encourage production.

Mrs. S. C. Marks, representing the Parent-Teachers' Association, said they would like to introduce milk lunches in the schools, but that the local product was unsatisfactory.

C. Haven Smalley, a producer, said that competent inspection of the source of production was most essential, and that all raw milk sold in the city should be from tuberculin tested cows. He presented figures showing that of the 14 cents paid by the consumer in Lafayette, but 3.8 cents goes to the producer—the farmer.

City officials reported that they had heard rumors to the effect that reconstructed milk was being sold in Lafayette, but never had been able to substantiate same. However, they stood ready to do anything possible to remedy the situation if any definite information was given them to work upon.

Dr. R. H. Carr, chemist of Purdue University, reported that it was possible to make from milk powder, milk that could not be detected, chemically or otherwise, from genuine raw milk; thus emphasizing the necessity of proper inspection of dairies, etc.

Motion was made that a committee of six be appointed, consisting of two producers, two distributors, and two consumers, to investigate and suggest a way to remedy the difficulty.

Adjourned.

W. M. RESER, Secretary.

March 22, 1921

Regular meeting called to order after luncheon by President McClelland. Minutes of two previous meetings read and approved without change.

A communication from the Tippecanoe County Tuberculosis Association asking for endorsement of the association's campaign against the "white plague" was read, and Doctor Campbell made a motion to adopt the following resolution: "Be it resolved by the Tippecanoe County Medical Society that we heartily endorse the sale of seals and expenditure of the money thus obtained by the Tippecanoe County Tuberculosis Association. We further pledge our support and aid in all the efforts of said association in the survey to be made in the near future." This motion was seconded by Doctor Reser and unanimously carried.

Another communication from Secretary Ebel of the Tippecanoe County Tuberculosis Association was read announcing that this Society had been elected to membership on the Board, with Doctor Reser elected to represent the Society on the Board for the ensuing year.

The application of Dr. G. R. Clayton by card from the Benton County Medical Society was read. Doctor Reser moved that the application be received and the name of Doctor Clayton be spread upon the roster. This was seconded and carried.

Doctor Moffitt read a very practical and entertaining paper on "Septicemia in Abortion".

Abstract:—All cases reported were criminal or self induced. The younger local members of the profession of today are not guilty. The local abortionists are not so active as was the case 25 or 30 years ago. Many of our modern day women have no scruples, not even religious, against abortion so that "many babies have to run the gauntlet before they get into the world".

Two methods of treatment of septicemia following abortion:

1. Active: Remove debris at once.
2. Expectant: Let uterus alone until five days after being free from fever unless severe hemorrhage. Nonseptic cases curetted as routine.

Results more favorable in septic cases under expectant treatment. Personal experience, woman will always tell who committed the criminal act when she thinks she is going to die.

Case Reports:—No. 1. 25 years ago Mrs. D. when first seen, temperature high. Delirious. Self induced with rat tail file. Lived one week. Case No. 2 (20 years ago). Girl, age 18 years. First seen temperature 104.5. Hemorrhage. Removed placental tissue. Septic 5 or 6 weeks. Called it typhoid fever. Recovered. Case No. 3 (15 years ago). Mrs. G. Septic when called. Temperature moderate, pulse rapid. Three weeks later paralyzed and died. Case No. 4 (12 years ago). Strong woman, age 30. Pregnant four months. Temperature high, pulse rapid. Discharge very fetid. Induced by doctor of near-by town. Removed placental tissue, swabbed with iodine and alcohol. Temperature up to 106, pulse 150, died in one week's time. Case No. 5. Widow, five months pregnant. Cervix rigid. Intense pains. Induced by doctor. Head of fetus punched full of holes. Recovered. Case No. 6. Girl, age 18. Metritis, having aborted some time previously. Resulted in convulsions which continued for two or three years, when she died. Case No. 7. Girl. Had a chill before called me. Fever high. Removed placenta. Recovered. Case No. 8. Mrs. H. Widow with children from first husband. Married second husband, who left her in pregnant state. Wanted abortion induced; refused and warned of danger. Went to abortionist. Died, leaving her children. Case No. 9. Girl (colored), age 20 years. Wanted abortion induced; refused. Went to abortionist. Died. Case No. 10. Widow. When first seen temperature 105, pulse 120. Had used medicine. Curetted. Recovered. Case No. 11.

Mrs. B, age 40 years. Weight 150 pounds. Worst case ever had. Self induced with male catheter. Having some hemorrhage. Gave ergot and tamponed. Cervix still rigid. Refused curettage. Week later bleeding again; again refused to go to hospital. Later said she was all right. Week later was called again. Temperature 105, pulse 140. Chills. Wouldn't consent to do anything. Finally went to hospital. Curetted and removed particles of placental tissue. Temperature still remained up, and chills. Used stock antistreptococcic serum. Later autogenous serum. Gave quinine and whiskey heroically. Chills every day. Temperature still high, pulse still rapid. Sweating. Left leg become greatly swollen. Abscess developed under knee. Died Dec. 29, 1920.

Discussion:—DOCTOR CAMPBELL. Several years ago was called to country to see a girl who was in pain. Removed a catheter. Three days later a fetus was delivered. Within a short time six others in the same neighborhood aborted. Seem to go in waves until someone slips over the great divide, then it ceases until they get over their scare.

Doctor Moffitt's paper was gleaned from a practice of about a half century. If his case reports could be printed and handed out by the doctor when he is solicited for a criminal act it surely would cause the ordinary woman to think twice before she went to another doctor for the same purpose.

At this time Doctor Kerr announced that he would have some motion pictures shown, depicting the diagnosis and treatment of gonorrhea and syphilis. These pictures were produced and sent out by the United States Public Health Service and the State Board of Health. This gave a very instructive entertainment for about one hour.

Adjourned. Members present 19, visitors 2.

W. M. RESER, Secretary.

INDIANA SECTION, AMERICAN COLLEGE OF SURGEONS

The first annual meeting of the Indiana Section, Clinical Congress of the American College of Surgeons, was held at the Claypool Hotel, Indianapolis, Monday and Tuesday, May 2 and 3, under the direction of Dr. Miles F. Porter, Fort Wayne, Chairman; Dr. Edmund D. Clark, Indianapolis, Secretary; and Dr. James Y. Welborn, Evansville, Counselor. Members of the Committee on Arrangements were Dr. J. Rilus Eastman, Indianapolis, Chairman; Dr. W. N. Wishard, Dr. John P. Oliver, Dr. Lafayette Page, Dr. O. G. Pfaff. Registration, 87.

General and special surgical clinics and demonstrations were held from 9:00 a. m. to 12 m. on Monday and Tuesday, at the City, Methodist and St. Vincent's Hospitals. These clinics were of unusual interest, and were well attended.

At 2:30 p. m. on Monday was held the Hospital Conference, presided over by the Chairman of the Indiana Section, Dr. Miles F. Porter.

The following subjects were discussed:

The Hospital Program of the American College of Surgeons and the Meaning of the Minimum Standard, by Harold M. Stephens, Director of Hospital Activities, American College of Surgeons.

The Work of the Hospital Surveyor, by Jas. L. Smith, M.D., Hospital Survey Department, American College of Surgeons.

Experience with the Standardization of Program of the American College of Surgeons from the Surgeon's Standpoint, Richard B. Wetherill, M.D., Lafayette.

Experience with the Standardized Program of the American College of Surgeons from the Hospital Superintendent's Standpoint, H. L. Foreman, M.D., Superintendent Indianapolis City Hospital.

The meeting on Monday evening was open to the public, and the large attendance of laymen indicated their keen interest in the aims and objects of these meetings, which are to give to the public better surgical service and better hospital service.

The program of the evening was of unusual excellence, and apparently was thoroughly appreciated by laymen as well as medical men. Following is the program:

Address of Welcome, Dr. H. G. Morgan, Indianapolis.

The American College of Surgeons, Dr. Franklin H. Martin, Chicago, Secretary-General of the American College of Surgeons.

The Surgeon and the Community, Dr. Wm. D. Haggard, Professor of Surgery, Vanderbilt University, Nashville, Tennessee.

The Early Recognition of Cancer, and Its Importance, Dr. Carl A. Hamann, Professor of Clinical Surgeons, Western Reserve University, Cleveland, Ohio.

What the Public Should Know About Cancer, Dr. Joseph C. Bloodgood, Associate Professor of Clinical Surgery, Johns Hopkins University, Baltimore, Maryland.

The Standardization of Hospitals, Judge Harold M. Stephens, Director of Hospital Activities, American College of Surgeons.

On Tuesday afternoon, Dr. Franklin H. Martin again spoke on Organization for Better Surgery; Dr. Wm. D. Haggard discussed the Present Status of the Cancer Problem; and Dr. C. A. Hamann read a paper on the Clinical Resemblance Between Inflammatory Processes and Neoplasm.

The annual business meeting of the Section was held Tuesday afternoon, preceding the scientific session. Evansville was selected as the next place of meeting, 1922, and the following officers for the ensuing year were elected: Chairman, James Y. Welborn, Evansville; secretary, Eldridge M. Shanklin, Hammond; counselor, Henry O. Bruggeman, Fort Wayne.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ARSPHENAMINE-SQUIBB.—A brand of arspenamine N. N. R. (see New and Nonofficial Remedies 1921, p. 41). Arspenamine-Squibb is marketed in ampules containing, respectively, 0.1 Gm., 0.2 Gm., 0.3 Gm., 0.4 Gm., 0.5 Gm., 0.6 Gm. Arspenamine. E. R. Squibb & Sons, New York.

NEOARSPHENAMINE-SQUIBB.—A brand of neoarsphenamine N. N. R. (see New and Nonofficial Remedies 1921, p. 45). Neoarsphenamine-Squibb is marketed in ampules containing, respectively, 0.15 Gm., 0.3 Gm., 0.45 Gm., 0.6 Gm., 0.75 Gm., 0.9 Gm. Neoarsphenamine.

SODIUM ARSPHENAMINE-SQUIBB.—A brand of sodium arspenamine N. N. R. (see New and Nonofficial Remedies 1921, p. 48). Sodium arspenamine-Squibb is marketed in ampules containing, respectively, 0.15 Gm., 0.3 Gm., 0.45 Gm., 0.6 Gm., 0.75 Gm., 0.9 Gm. sodium arspenamine. E. R. Squibb & Sons, New York. (*Jour. A. M. A.*, April 9, p. 1007).

PROPAGANDA FOR REFORM

DIGIFOLIN NOT ADMITTED TO N. N. R.—Digifolin-Ciba is a product of the Society of Chemical Industry of Basle, Switzerland. It is claimed to be "a preparation of digitalis leaves, that has been freed from their useless and harmful principles such as digitonin (saponin), coloring and inert matter, etc., but does contain all the really valuable and therapeutically active constituents of the leaves, namely, digitoxin and digitalein, in their natural proportions.

The Council on Pharmacy and Chemistry reports that there is no evidence that digifolin contains all of the glucosides of digitalis as they exist in the leaf and that it is extremely improbable that this is the case, because one cannot remove the saponin without altering the other active principles of digitalis. The Council also held unwarranted the claim that Digifolin does not have the disadvantages of galenical digitalis preparations since it is well established that the untoward effects of digitalis are inherent in the principles that exert the desired effects of digitalis and that these may be avoided largely by a carefully regulated dose of any digitalis preparation. The claim that Digifolin-Ciba has all the advantages and none of the disadvantages of digitalis has been refuted so frequently that manufacturers must be aware that it is untenable. Further, the report concludes, the claims now made for Digifolin are essentially those made nearly four years ago, at which time the attention of the American agent was called to their unwarranted character (*Jour. A. M. A.*, April 2, 1921, p. 952).

HEXAMETHYLENAMIN AND SODIUM ACID PHOSPHATE.—Hexamethylenamin acts in acid urine only. Hence, if the urine is not acid, sodium acid phosphate should be given in doses of 1 to 2 gm. midway between the doses of hexamethylenamin. Enough of the sodium acid phosphate should be given to render the urine acid, but not enough to cause diarrhea (*Jour. A. M. A.*, April 9, 1921, p. 1031).

LASH'S BITTERS.—A physician reports that he was called to see a patient who had consumed ninety-one bottles of Lash's Bitters in thirty-six days. Previously the patient had consumed Wine of Pepsin in about the same amount. The amount of Lash's Bitters consumed is equivalent to about twenty ounces of straight whisky daily. The label on the Lash's Bitters bottle declares "Guaranteed free from habit-forming or injurious drugs" (*Jour. A. M. A.*, April 9, 1921, p. 1029).

MORE MISERABLED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, on the ground that the therapeutic claims made for them were false and fraudulent: *Treatamiento Zendejas* (Panfilo Zendejas), a solution containing potassium iodid, plant extractives and sugar. *Helmitol* (Bayer Co., Inc.), tablets consisting of hexamethylenamin, methylencitrate and talc. *Self-help E. and I. Treatment* (Henry S. Wampole Co.) consisting of a liquid which was essentially zinc chlorid and glycerin and tablets containing cubebs, copaiba balsam with small amounts of santal oil, alum and magnesium oxid. *Urseptic Pills* (G. J. Fajardo), consisting essentially of hexamethylenamin, cubebs, santal oil and kava kava. *Pinkolo Ointment* (Custer Chemical Co.), an ointment containing camphor, red mercuric oxid and zinc oxid (*Jour. A. M. A.*, April 9, 1921, p. 1029).

COD LIVER OIL IN RICKETS.—For many years cod liver oil has been regarded almost as a specific against rickets in children. During recent years it has been made reasonably certain that the administration of cod liver oil alters the calcium balance in such a manner that calcium will be retained in the body and that it increases the capacity of rachitic children to take up and hold calcium. Since the beneficial effects of cod liver oil on rickets may be due to its liberal content of vitamine A, frequently described as the Fat-Soluble food accessory, it is interesting to know that crude unrefined cod liver oil may be 250 times as rich as butter in vitamine A and that samples of refined oil, although not so active as the crude oil, were also far superior to butter in their vitamine potency. The ease with which the Fat-Soluble A

Vitamine of cod liver oil is destroyed by reagents and drastic manipulations make the various "refinements" of cod liver oil products sold as proprietary preparations even more reprehensible than they have seemed in the past.—(*Jour. A. M. A.*, April 9, 1921, p. 1009).

SOME OF LOESER'S INTRAVENOUS SOLUTIONS.—The Council on Pharmacy and Chemistry reports that Loeser's Intravenous Solutions of Hexamethylenamin, Loeser's Intravenous Solution of Hexamethylenamin and Sodium Iodid, Loeser's Intravenous Solution of Sodium Salicylate, Loeser's Intravenous Solution of Salicylate and Iodid, Loeser's Intravenous Solution of Sodium Iodid and Loeser's Intravenous Solution of Mercury Bichlorid, manufactured by the New York Intravenous Laboratory, were not accepted for New and Nonofficial Remedies because they are sold under misleading claims regarding their alleged safety and efficiency. The fundamental objection to the claims made for these preparations is the general claim of superiority and safety of the intravenous method. The Council continues to hold that intravenous medication generally is not as safe as oral medication, even with relatively harmless substances and that it does not give "improved clinical results" except under rather narrowly confined circumstances, namely, if the drug undergoes decomposition in the alimentary tract, if it is not absorbed, if it causes serious direct local reactions, or if time is an urgent element. The Council has recognized intravenous preparations which satisfy these requirements. The Council concluded that these solutions did not meet these conditions.—(*Jour. A. M. A.*, April 16, 1921, p. 1120).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities, chiefly because the therapeutic claims advanced for them were held false and fraudulent: Methylax Blue Pearls (Pfeiffer Chemical Co.), capsules containing cubebs, methylene blue and probably copaiba and kava kava. Jax Capsules and Antiseptic Injection (The Tropical Cooperative Co.), the capsules containing cubebs, balsam of copaiba and corn starch while the injection was reported to consist of a solution containing phenol, thymol, methol, boric acid and zinc sulphate. Stops It in One Day (O. K. Remedy Co.), consisting of two preparations, a bottle containing a dilute solution of berberin sulphate, and a tube containing a mixture of potassium permanganate and potassium sulphate. Purola Kidney and Liver Remedy, Diarrhea Mixture, Femalin, Sarsaparilla Compound and Compound Extract of Buchu (The Blumauer-Frank Drug Co.), the first, a solution containing vegetable extractives carrying emodin and resin, potassium acetate, sugars and a trace of salicylic acid; the second, a solution of opium, camphor, capsicum extractives, rhubarb, oils of peppermint and anise and a trace of gambir; the third, a solution containing glycyrrhiza extractives, emodin, resin, a trace of alkaloid, sugar, glycerin and aromatics; the fourth, a solution of vegetable extractives carrying emodin, indications of saponin, glycyrrhizin, alkaloids, volatile oils, sugar, glucose and potassium iodid; the fifth, a solution of buchu extractives, sugar licorice and extractives, potassium acetate and little, if any emodin. Planter's Golden Crown Special (Planter Medicine Co.), consisting essentially of oil of cassia, methyl salicylate, copaiba, alkaloids of sanguinaria, ethyl nitrite, water and alcohol.—(*Jour. A. M. A.*, April 23, 1921, p. 1185).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the therapeutic claims were held to be false and fraudulent:

Antibrule (Crescent Chemical Co.), essentially a watery solution of picric acid and a small quantity of picrates. Burkhart's Vegetable Compound (Dr. W. S. Burkhart), consisting essentially of aloes, capsicum, and plant extractives including resins, probably podophyllin. S. O. S. (Pfeiffer Manufacturing Co.), consisting of two preparations; one, a watery solution containing thymol, zinc, magnesium sulphates and glycerin; the other, pearls containing santal oil, copaiba balsam, oil of cinnamon and fixed oil. Osgood's Special Capsules (H. Planten & Son), consisting of volatile geranium oil, a phenolic compound and a sulphurated fixed oil. Gin-berry Capsules (Henry S. Wampole Co.), composed essentially of cubebs, balsam of copaiba, santal oil, magnesia and alum. Benetol Vaginal Suppositories (Benetol Co.), consisting essentially of alpha and beta naphthol, boric acid and traces of menthol and phenol in a cacao butter base. Mowery's Gonorrhea Paste (Binkley Medicine Co.), essentially powdered cubebs, copaiba balsam, alum and magnesia.—(*Jour. A. M. A.*, April 30, 1921, p. 1263).

ALUMINUM POTASSIUM NITRATE.—The product advocated in the July 17, 1920, issue of the *Chicago Medical Bulletin* for the treatment of osteomyelitis is not on the market. The product, which is said to be used, has been analyzed for the Council on Pharmacy and Chemistry in the Association's Chemical Laboratory. Analysis showed that it did not have the composition claimed. For practical purposes the preparation may be regarded as a mixture of 97.5 percent potassium nitrate U. S. P. (saltpetre) and 2.5 percent of aluminum nitrate (which may be purchased from chemical supply houses).—(*Jour. A. M. A.*, April 30, 1921, p. 1265).

BENZYL BENZOATE.—This drug has been widely accepted, chiefly on the basis of experiments on excised organs as an efficient antispasmodic agent for smooth muscle in various regions. Few observations have been made, however, as to its action on intact organs. Recent investigation has raised serious doubt as to the efficiency of benzyl benzoate as an antispasmodic for the intact uterus, intestines, stomach and bronchi. Large doses injected into dogs intravenously (so that the drug might act on the smooth muscles of these organs) gave almost totally negative results. This investigation suggests that allowances should be made for impressions, reflex influences, the psychic state and natural recovery before drawing definite conclusions as to the beneficial effect of benzyl benzoate, especially in such capricious conditions as hiccup, whooping cough, asthma and dysmenorrhea for which it has been advocated.—(*Jour. A. M. A.*, April 30, 1921, p. 1252).

BOOK REVIEWS

AMERICAN RED CROSS WORK AMONG THE FRENCH PEOPLE.—By Fisher Ames, Jr. 178 pages. The Macmillan Company, New York, 1921. Cloth, \$2.

The title of this book indicates the scope covered in the text. The book deals with the American Red Cross work during the war period and the months immediately following, and does not attempt to take up post war activities. Everyone knows that the Red Cross did a wonderful work in Europe during the war period, and in view of the fact that the citizens of the United States voluntarily contributed more than \$400,000,000 for Red Cross work, much was expected. It is with the view of letting the American people know what was accomplished that a series of books on the subject have been prepared. The one dealing with Red Cross activities in France is especially interesting.

THE ESSENTIALS OF HISTOLOGY—By Sir Edward Sharpey Schafer, F.R.S., Professor of Physiology in the University of Edinburgh; formerly Jodrell Professor of Physiology in University College, London. Eleventh Edition. 578 pages. Lea & Febiger, Philadelphia and New York, 1920. Cloth, \$4.50.

Eleven editions of a book is a recommendation which should not be ignored, but anyone who examines this last contribution from a well known physiologist and author of numerous textbooks will be convinced that this book is unsurpassed as a textbook for the student. In reality it is an elementary textbook of histology giving the student detailed directions for the microscopic examinations of the tissues. It is well illustrated, many of the illustrations being in colors. No effort has been spared to make the subject matter thoroughly intelligent to the average student.

EYE, EAR, NOSE AND THROAT—Volume 3 of the Practical Medicine Series. Edited by Casey A. Wood, C.M., M.D., D.C.L.; Albert H. Andrews, M.D.; George Shambaugh, M.D. Series 1920. 382 pages. Cloth, \$1.75. Price of the series of eight volumes, \$8.

While this series is published primarily for the general practitioner, at the same time the arrangement in several volumes, each devoted to special subjects, enables the specialist to acquire the latest information concerning his particular work. In reality this book represents most of what is worth while in the way of abstracts of current eye, ear, nose and throat literature for 1919. Many of the abstracts are made more interesting by the comments of the editors who are well known clinicians. The book is a valuable addition to any specialist's library.

THE WASSERMANN TEST—By Charles F. Craig, M.D., M.A., F.A.C.S., Lieutenant Colonel, Medical Corps, United States Army; Professor of Bacteriology and Preventive Medicine, and Director of Laboratories, Army Medical School, Washington, D. C. Formerly Curator, Army Medical Museum; and Commanding Officer Yale Army Laboratory School. Second Edition. Illustrated with colored plates, halftone plates and sixty-one tables. 280 pages. C. V. Mosby Company, 1921. Cloth, \$4.25.

As we had occasion to say in reviewing the first edition of this work, we hardly think that any physician who is doing any laboratory work can afford to be without this book. This second edition represents a revision of practically all of the chapters and even a rewriting of many, so that it is thoroughly up to date and represents the latest advances in making the complement fixation test for syphilis. Many modifications based upon extended experience in the government hospitals during war service have been added as an improvement to the technique of the test. The work is highly recommended to all those doing bacteriological work.

A TEXT-BOOK OF DERMATOLOGY—By J. Darier, physician to the Hospital Saint-Louis, Member of the Academy of Medicine, Paris, France; Honorary Member of the American Dermatological Association, etc. Authorized translation from the second French edition. Edited with notes by S. Pollitzer, New York, Ex-President of the American Dermatological Association; Corresponding Member of the French Society of Dermatology and Syphilography, etc. Illustrated with 204 engravings and 4 colored plates. 770 pages. Lea & Febiger, Philadelphia and New York, 1920. Cloth, \$8.50.

This book covers the entire domain of cutaneous dermatology and is as concise and practical as possible while still conveying the essential data necessary for an intelligent idea concerning diagnosis and treatment. The material has been arranged according to a plan that is not usually customary, though it seems to be a most logical one. Thus the first part is devoted to the morphology of the dermatoses and is divided into eruptive and non-eruptive dermatoses, whereas the second part deals with the classification according to the nature of the disease. Hence in the second part are discussed artificial dermatoses, parasitic dermatoses, infectious dermatoses, neuro-dermatoses, tumors of the skin, etc. The book concludes with an excellent chapter on therapeutic notes, in which is incorporated numerous prescriptions which are applicable to various classes of cutaneous lesions. The first edition of this work was exhausted several years ago, and this second edition will be appreciated by all those physicians who wish to obtain the latest information on the subject of dermatology by one of the leading French dermatologists. The value of the book is enhanced by explanatory notes and suggestions by the translator, who is one of our most distinguished American dermatologists.

PUBLIC HEALTH AND HYGIENE—By William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, and Director of the Bureau of Laboratories of the Department of Health, New York City. Illustrated with 123 Engravings. 884 pages. Lea & Febiger, Philadelphia and New York, 1920. Cloth, \$10.

This book is intended for public health officials, but will prove of interest to physicians and medical students who are interested in hygiene in relation to public health. The subject matter has been presented in a practical way by a large number of specialists actually devoting themselves to the subjects treated by them. Not only the people but the medical profession is appreciating the necessity of paying more attention to hygiene and its practical application in preventive medicine. All of the various phases of the subject are treated comprehensively and intelligently in this well written book. An idea as to the comprehensiveness of the work may be obtained by noting the subjects treated in the various chapters which are as follows: Relation of Microorganisms to Disease; Antimicrobial or Antiprotein Substances Individually Considered; Prevention of Individual Infectious Diseases; Practical Use of Disinfectants; Epidemiology; Sanitary Surveys; Air and Health—Ventilation; Housing; Food; Vitamines; The Preservation and Adulteration of Food; Bacterial and Other Contaminations of Milk. Their Relation to Public Health; Bacterial Infections and Parasitic Diseases from Milk, Meat and Other Foods; The Soil; Water Supplies and Their Purification; Sewage and Waste Disposal; Housing and Plumbing; The Sanitation of Swimming Pools; Personal Hygiene; Additional Practical Points in Personal Hygiene; Military Hygiene; Rural Public Health Work; Tropical Hygiene; Industrial Hygiene; Child Hygiene; Sociologic and Economic Aspects of Disease; Public Health Education; Mental Hygiene; Mental Defectives. Preventing and Controlling Measures; Maritime Quarantine; Vital Statistics.

THE STORY OF THE AMERICAN RED CROSS IN ITALY—By Charles M. Bakewell. New York, the Macmillan Company, 1920. Cloth, \$2.00.

As stated in the introduction, this book is intended to tell the American people, who contributed so generously to the Red Cross Fund, the simple tale of what their dollars did in Italy. It is an interesting

(Continued on Advertising Page xviii)

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(Continued from Page 174)

story of the service that the Red Cross rendered in alleviating as far as possible the sufferings of the stricken people after more than two years of strenuous fighting. The material aid given the stricken people extended from one end of Italy to the other, and was not confined strictly to the area occupied by the fighting forces, but took into consideration relief for the needy families of soldiers, and assistance to a poverty stricken populace suffering from the ravages of a devastating war. It not only tells what was done, but how it was done and without attempt to give praise or credit to individuals. The book concludes with a number of interesting tables showing receipts and expenditures, with a detailed report as to how the money was expended. Also several chapters are given over to a list of the personnel of the Red Cross in Italy.

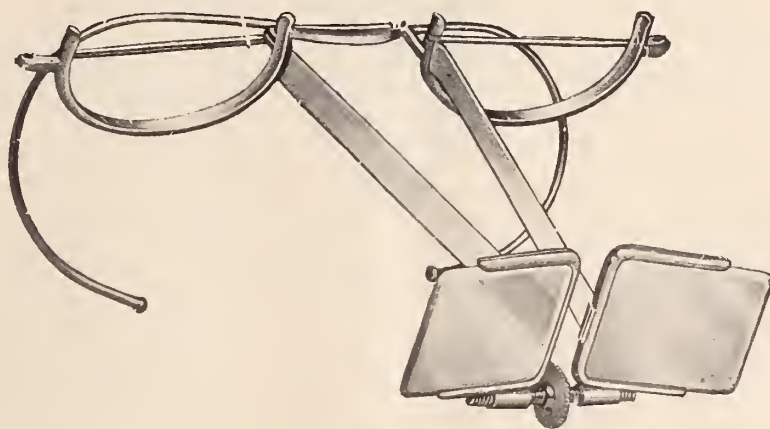
BLOCK ANESTHESIA AND ALLIED SUBJECTS, with special chapters on the Maxillary Sinus, the Tonsils, and Neuralgias of the Nervus Trigemini for Oral Surgeons, Dentists, Laryngologists, Rhinologists, Otolologists, and Students, by Arthur E. Smith, D.D.S., M.D. 896 pages, 595 illustrations. Cloth, \$15.00. St. Louis, C. V. Mosby Company, 1920.

While this work appears to have been written and published for the dental profession, yet it is a valuable text-book for all members of the medical profession who are interested in the subject of local anesthesia. As is well stated by a friendly critic, "He who reads this book will be more deeply impressed than he ever was before with the breadth and scope of local anesthesia." The chapters on the history of general as well as local anesthesia, the development, methods of applying, and the methods of producing local anesthesia are interesting, but of special interest are the chapters dealing with the block anesthesia used in various surgical operations about the head. The author emphasizes the necessity for accuracy in the technic and points out that failure means in most cases incompetence and inaccuracy in technic. Today the modern trend is to entrust the administration of the general anesthetic to specialists, and a large number of hospitals have a trained anesthetist on the medical staff. The modern surgeon no longer regards the anesthetist as the least important factor in the performance of the operation, but fully realizes that in many cases the anesthetist's responsibility is as great as that of the operator himself, and there is a growing demand for the intelligent and skillful use of local anesthesia. The operator who administers either a general or local anesthetic should have a knowledge of physical diagnosis, the therapeutic and toxic actions of anesthetic drugs, treatment of syncope, shock and collapse, etc. Block anesthesia requires a thorough mastering of the technic, and this may be accomplished by the average student if he goes about it in the proper and scientific way. The author has, therefore, given special attention to the details, and has elucidated the subject by a very large number of beautiful illustrations. He especially teaches that physical diagnosis is essential to determine which anesthetic is best for the particular case, though he does not hesitate to say that local anesthesia has an almost unlimited field of usefulness, and is deserving of more consideration than it usually receives. The chapter on blocking for tonsillectomies and for operations upon the nasal wall and septum will prove of value to the laryngologists and rhinologists because it gives a method of procedure that is a departure from processes used in the past. Likewise the chapters on tie douloureux, and operations upon the maxillary sinus will prove valuable to the general surgeon as well as the nose and throat surgeon. The book will be found

of interest to anyone who practices local anesthesia and we believe that every special as well as general surgeon should have a copy of it in his library.

GEORGE MILLER STERNBERG: A BIOGRAPHY—By his wife, Martha L. Sternberg. 232 pages with illustrations. Cloth, \$5.00. Chicago American Medical Association, 1920.

As the editor of the *Journal of the American Medical Association* well says, "The name of Dr. Sternberg immediately calls to mind one of the great episodes in the medical profession, that of the conquest of yellow fever, in the successive stages of which three medical officers of the United States Army, Drs. Sternberg, Reed and Gorgas, played the leading role." Dr. Sternberg served as an army surgeon throughout the Civil War and the Indian Campaigns where he acquired valuable experience in combatting cholera and yellow fever. He was a pioneer worker in bacteriology, having discovered the pneumococcus in 1880 and was the first in this country to demonstrate the organisms of malaria, cholera, and tuberculosis. The practice of modern disinfection is based on Dr. Sternberg's researches on the value of commercial disinfectants. As Surgeon General, Dr. Sternberg directed the medical activities of the army during the Spanish-American war, founded the Army Medical School, organized the nurse corps and the dental corps, and established many military hospitals throughout the United States, including the tuberculosis hospital at Fort Bayard. By the establishment of laboratories and by personal encouragement he inspired medical officers of the army to engage in research work, to the development of which he had spent the best years of his life. Many scientific investigations were conducted during his term as Surgeon General, the most important of which related to tropical diseases, typhoid fever and yellow fever. During the Spanish-American war he recommended the appointment of the Typhoid Fever Board which made an investigation of typhoid fever in the military camps and led to the formulation of adequate measures of prevention. His interest in yellow fever never flagged. He fought several epidemics of the disease in the cities and military posts along our coast, and himself suffered a severe attack of the disease. He was a member of the first Havana Yellow Fever Commission and he made exhaustive studies of the disease in Cuba, Mexico, Brazil and other tropical countries. One of the most brilliant discoveries in the history of medicine resulted from his appointment on the Yellow Fever Board in May, 1900, which by human experimentation proved conclusively that yellow fever is transmitted by mosquitoes. The practical application of this discovery resulted in the eradication of yellow fever from Havana and contributed to the successful building of the Panama Canal. After his retirement from the Army, he did much to improve housing conditions among the laboring classes in Washington, and toward the prevention of tuberculosis. He was the author of a manual of bacteriology, and of several other works on special topics, notably on malaria, immunity, serum therapy and infection. He was highly honored during his lifetime, and was president of the American Medical Association and of many other scientific societies. The story of General Sternberg's life is one of arduous devotion to duty, of unflagging industry, and of unexcelled patriotism. The biography has been written with the sincere hope that the life and work of Dr. Sternberg may serve as an inspiration to the present and future generations of American physicians to achieve renown in the science of preventive medicine.



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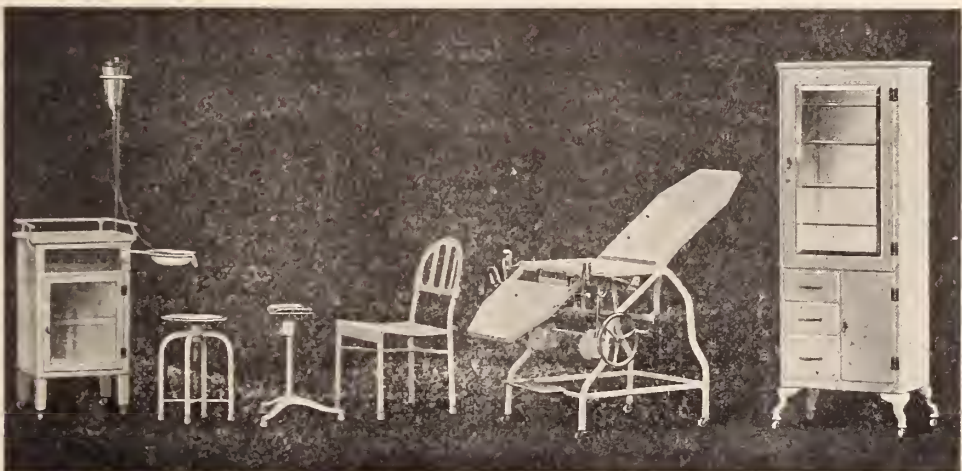
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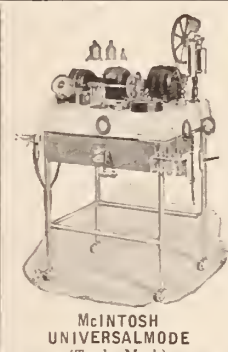
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Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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CANCER OF THE BREAST*

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Cancer of the breast is essentially a disease of women as the proportion of males to females is less than one to one hundred. The most common form is scirrhus, though the microscopic and clinical classification frequently disagree and as Ewing¹ says, "the various microscopic features may be combined in different degrees and many fully developed carcinomas exhibit all of them from a very early period." Numerous sections are often necessary for the diagnosis of malignancy and should always be made for classification. Practically speaking cancers may be said to evolve from pre-existing cells and in the early period of their existence they do not present either clinical or microscopic features that may be said to be pathognomonic. Frequently on former occasions I have said that tumor was a relatively late sign of cancer. I have recently had two more cases which corroborate this opinion and I want to repeat here that abnormal discharges from the breast and retraction of the nipple occurring separately or coincidentally should be regarded as signs of malignancy until proven otherwise. The character of the discharge is not diagnostic. Frozen sections should be made in cases of doubt and a positive report should be accepted by the operator provided it is in accord with the macroscopic and clinical findings, but in case there is lack of agreement between the microscopic and clinical findings it is wiser to be guided by the clinical findings, always remembering that the patient should be given the benefit of the doubt by doing a reasonably radical operation. I say a "reasonably" radical operation because it is not deemed necessary to remove the pectoral muscles and axillary lymphatics in those early cases in which the histologic malignancy does not pass the membrana propria². It should be remembered that occasionally although rarely cancer of the breast occurs in the young. I

have seen one case in a girl of seventeen and two cases are reported³ as early as eleven years. The influence of the married state on the production of cancer of the breast is an unsettled question, but that pregnancy and especially nursing contribute to the development of cancer of the breast there can be little doubt.

The facts available do not, in the writer's opinion, bear out the dictum of Benedict "that heredity plays no notable part in cancer". On the contrary there is little or no reason for doubting the transmission from parent to child of a tendency to cancer.

All tumors of the breast should be regarded as malignant until it is proven that they are benign. This proof can be secured only by careful microscopic examination. It follows therefore that all tumors of the breast should be excised, and examined microscopically and further procedure based upon the result of this examination. Ten years ago in a paper⁴ read before this Association I ventured to coin the term "potential cancer" for those lesions that are known to become at times malignant. The term is now in common use together with the cognate term "precancerous" to designate those conditions which although not malignant in the light of present day knowledge nevertheless carry with them the menace of malignancy.

A general thorough appreciation by the profession and the public of the known facts about early cancer would result in the saving of thousands of lives annually. The causes of failure to secure permanent cure of cancer of the breast by surgical measures, mentioned in the order of their importance, are metastasis via the lymph channels to the axilla, the chest and the abdomen, and local recurrence. Torok and Wittelschofer (quoted by Ewing) found metastases in 62 percent of 119 cases in which there were no axillary nodes. The absence of axillary involvement therefore does not preclude the possibility

(1) Neoplastic Diseases—1919—Page 452.

(2) Mac Carty American Journal Medical Sciences—Vol. 157, 1919, Page 663.

(3) Miles F. Porter—Transactions A. A. O. G. 1919.

(4) Journal A. M. A., Vol. 55—Page 775, 1910.

*Presented before the Indiana State Medical Association, at the South Bend session, September, 1920.

of metastases. *Per contra* the existence of axillary nodes does not mean the existence of internal metastases. Axillary involvement is not therefore a bar to operation. Many secondary operations have resulted in permanent cures, hence it follows that the rule should be to remove recurrent nodules as soon as they are found. X-ray examination is a valuable aid in determining the presence or absence of internal metastases. In this connection it is well to recall the fact that practically all properly performed operations for the removal of carcinoma of the breast, whether they result in permanent cure or not, are beneficial to the patient either in the way of prolonging life or making it more livable or both.

In the preparation of this paper it is assumed that there is entire agreement among surgeons that the best treatment for cancer of the breast is early and complete removal by the knife, and that the only question open to discussion is how best to apply this general rule to the particular case. Results all too frequently remind us of the fact that our operation was too late but neither patient nor doctor ever laments a too-early operation.

Properly administered x-ray treatment after surgical removal is beneficial and should be resorted to more generally than it is. But it should be emphasized that the use of the x-ray or radium prior to surgical removal should, save in exceptional cases, be proscribed in cancer of the breast. By exceptional cases is meant those past hope of successful removal and the suspicious skin lesions that one sometimes though rarely sees.

The number of operative plans advised for removal of cancer of the breast is great and of each perhaps something good may be said, but no one may be said to be the best. It is well for the surgeon to wed himself to no particular plan but make himself master of the whole situation and then to do that operation which best suits the case in hand. It is well however to keep in mind certain cardinal principles:

1. No sacrifice in the way of time, cosmetic results, or utility is too great to make for the cure of the patient, but unnecessary mutilation is to be avoided.

2. Properly planned incisions with undermining of the skin and at times mobilizing of the opposite breast will make it possible to close nearly all of these wounds.

3. The posterior thoracic nerve should be preserved.

4. The flap lining the axillary space should be held snugly in the apex by stitches or dressing to avoid subsequent inability to elevate the arm.

5. Careful and complete hemostasis adds to the safety, comfort and convenience of the patient and will frequently do away with the necessity for drainage and allow healing of the wound under the primary dressing.

6. Early use of the arm should be encouraged.

DISCUSSION

DR. WILLIS D. GATCH (Indianapolis): The subject of this paper is an important one and I think we will in the main agree with the position taken by the essayist. Certain broad principles should be kept in mind in our treatment of any suspicious lesions of the breast. It is an old saying that the easier the diagnosis the harder the cure, and the harder the diagnosis the easier the cure. This simply means that these cases are easy to cure if you get them early, and hard to cure if you get them late. The propaganda through the press, medical and lay, warning people of the necessity of being on the lookout for early signs of malignancy, is bearing fruit, and women are coming in with early lesions—lesions which it seems impossible to diagnose without an exploratory incision. Our old reliable test of placing the patient in a good light, and making the breast describe the greatest possible excursion on the chest wall, watching meanwhile for signs of retraction of the skin is perhaps as good a test as any for early cases. We make a bad mistake if we wait for retraction of the nipple and invasion of the skin and lymph nodes. In case you are not sure, explore. I often lay open the lesion and take out a piece for frozen sections being just as thoroughly prepared as those made by the slow method.

I agree with Dr. Porter's statement that it is unnecessary in some cases to remove the pectoral muscle. The statement was, "that in cases in which there is epithelial hyperplasia without any break through the basal membrane, it is not necessary to do more than remove the breast". I do not regard these cases as cancer, but as precancerous lesions. I think if you have real cancer there is usually very little difficulty in recognizing it either under the microscope or in the gross.

DR. THOMAS C. KENNEDY (Indianapolis): I agree with the essayist that these cases should be operated, but I want to call your attention to two classes which have not been mentioned here. We have a large number of these cases of cancer of the breast who absolutely refuse operation; and then we have a second class in which there is some contra-indication for operation, such as age, a head or kidney lesion, etc. In these cases what shall we do? Shall we leave them without any treatment, or shall we permit them to go to the quack and be burned

and blistered, for they are not satisfied to go along in that same kind of treatment. In our work at the radium laboratory in Indianapolis we have always advised every case of cancer of the breast to be operated. Until about four years ago we refused to treat any case with radium that refused operation. Four years ago last month a physician in the southern part of the state brought his mother, who had cancer of the breast, primary lesion, but on account of her age and also a mitral lesion she absolutely refused operation, so we undertook to treat her with radium. There was complete retrogression of the mass, the axillary metastasis disappeared, and she is alive and well today, four years after treatment.

About three years ago another physician brought his mother-in-law to me. Her breast was ulcerated and in such condition that the blood showed through her clothes. We did not want to undertake this case, as the conditions were such that it seemed absolutely hopeless, but the physician insisted and we treated her and she is alive and well today. There is some cicatricial tissue, and whether it is malignant or not I do not know, but she is clinically well.

Since that time I recall four other cases that we have treated with radium in which there has been complete disappearance, a clinical cure effected. Now the question arises, would it not be advisable to treat some of the operable cases? In other words, is it necessary for us to insist so strongly that these cases should be operated when we have had success with a certain number of cases? I am not advising the use of radium in operable cases. I believe that we should resort to surgery, but I believe that with improvement in our technique, and experience with a greater number of cases, the number of operable cases will be somewhat limited. Operation frequently gives a useless arm because of a blocking of the lymphatics, and the arm becomes enormously swollen. They are laid up in the hospital for quite a while, there is pain from the operation, while with the application of radium there is absolutely no pain, the treatment takes comparatively short time, and they are not in the hospital very long. I believe that within a short time we will be using radium in a greater number of cases which have heretofore been considered operable.

I think it is Lazarus Barlow of England who says that radium breaks down the cancer cells and the broken down cells are absorbed and produce a true immunity against their growth. In other words, it is a vaccine. If this is proven to be true, radium will be more efficient than surgery. Radium not only produces mitosis of the cancer cells, but it also stimulates the good

tissue to a greater resistance. I believe it will be only a question of a short time until we are treating more of these cases with radium and operating fewer of them.

DR. H. A. DUEMLING (Fort Wayne): I am heartily in accord with what Dr. Porter brought out in his paper, and I want to endorse what Dr. Gatch said about the removal of these precancerous conditions. We know these conditions frequently progress to true malignancy. In those cases it is not necessary to do as extensive operation as in a well advanced case, but still, considering how much is at stake, I do as extensive operation in those cases as the other. The time consumed in recovery is not great, the deformity is not visible any way, and you have the additional assurance that you have destroyed the ordinary avenues of metastasis. I would take out the glands of that axilla. I believe, too, in practically all cases where there is involvement of the lymphatics, particularly the neck, these cases are totally inoperable unless they are put into our hands after treatment with radium which assures us that the metastasis has been destroyed.

Cancer of the breast occurs sometimes so insidiously that the words of Dr. Porter in regard to unnatural discharges should be heeded by all of us. The Mayos have shown that a bloody discharge from the nipple is a very serious symptom that needs to be explained and investigated until the truth is arrived at.

In regard to the extensive operation requiring the removal of an entire arm, I have yet to see a case that has even been benefited beyond a few months at the outside, and I do not believe such cases should be subjected to operation. And, furthermore, if more of them were sent home it would result in other cases applying for treatment in a seasonable time.

As to the various lymphatic injections, of course no physician would be guilty of wasting the days of grace by any such tomfoolery.

PERNICIOUS ANEMIA AND ITS TREATMENT BY HOMOHEMOTHERAPY*

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Progress in our study of pernicious anemia cannot advance very far so long as nothing definite regarding its cause is known. In spite of the steadily increasing knowledge regarding some of the clinical aspects of this disease, its

*Read before the Northern Tri-State Medical Association at Toledo, Ohio, April 12, 1921.

etiology still remains obscure. Indeed, as Osler¹ points out, our position with reference to the cause of pernicious anemia is no better than it was in the days of Addison, whose original description may still be used as embodying practically all the distinguishing clinical features of pernicious anemia.

Our present-day conception is that pernicious anemia is the result of the activity of unknown hemolytic agents. These agents, whatever their nature may be, exhibit a special specific affinity for the blood and blood-forming organs, and the spinal cord. Although the pernicious manner in which these destructive agents act on the blood and spinal cord is understood, nothing whatever is known regarding their true nature and origin.

Of some importance relative to the unanswered question of the origin of these agents may be the occurrence of five cases of pernicious anemia at one time in a small community of some 2700 inhabitants in Northern Indiana. Clinically these cases were unmistakable, and with the aid of thorough laboratory investigations the diagnoses were established as conclusively as clinical diagnoses can be. Following is the order in which they came under observation in the private practice of Dr. G. W. McCaskey*:

Case 1. P. M., male, age 65, first seen on March 7, 1919.

Case 2. D. C. H., male, age 63, first seen on June 26, 1919.

Case 3. Mrs. P., female, age 64, first seen on Aug. 11, 1919.

Case 4. J. T., male, age 65, first seen on Aug. 30, 1919.

Case 5. J. W. W., male, age 72, first seen on July 23, 1920.

The simultaneous presence of these five cases of pernicious anemia in a community in the ratio of approximately two per thousand of the population is apparently more than a mere coincidence. It is possible that there may have been present in this community at the same time other cases of this disease which did not come under our observation. If this be true, obviously the ratio would be even greater. Although the incidence of this disease "in any community is a matter of keenness on the part of practitioners", such an unusually high rate as that given here is certainly highly suggestive. The idea suggests itself that the agents causing this disease are exogenous rather than endogenous, *i. e.*, substances that come from outside the affected individual; that they may appear in sufficient number or acquire virulence enough to incite the disease in quite a large percentage of a community; and that in these respects, at least, they exhibit a striking similarity to pathogenic agents causing definitely known infections.

In the treatment of pernicious anemia the value of intravenous administration of human blood has become generally recognized. This therapeutic procedure has long been known as transfusion, but it should now be replaced by the more appropriate designation "homohemotherapy", a term introduced by Sicard and recently used by Voncken². The splendid work of Bernheim³ in reviewing and summarizing our knowledge as to the use and value of blood transfusion in the anemias has done much to "popularize" this therapeutic measure. In the past, injections of large amounts of blood were the rule; it was rather exceptional to use small amounts. Recently, however, the pendulum has begun to swing in the opposite direction, and clinicians are beginning to realize more and more that repeated intravenous homohemotherapy with small amounts of blood apparently are of greater benefit than single large transfusions. How the intravenous injection of blood brings about its therapeutic effect, or just what its beneficial effect is due to, is at present not clearly understood, for the benefits derived from this procedure, as recently pointed out by Karsner⁴, are out of proportion to the amount of blood used. Not only do repeated small injections seem to be of greater benefit, but they are undoubtedly much safer. Karsner⁴ issues the warning that it is imperative to bear in mind that in chronic anemia—like pernicious anemia—more harm than good may be done by large transfusions, because in such cases the bone marrow has adjusted itself to the small number of circulating red blood cells, and the sudden introduction of a great mass of blood is apt to produce "a serious depression of the already relatively inactive bone marrow", so that repeated small injections in all probability are to be preferred to single large transfusions. Evidently Bernheim's³ prediction that "future experience may teach that much smaller doses (of blood) given at definite periods will prove more efficacious in certain conditions" already seems to have been borne out by clinical experience.

Furthermore, homohemotherapy with small amounts of blood is to be preferred to single large transfusions because of the simplicity of this method. A glass syringe of 50 Cc. or 100 Cc. capacity containing enough sodium citrate solution to make about one percent of the total

(1) Osler, W., and McCrae, T.: *The Principles and Practice of Medicine*, New York and London, D. Appleton & Co., 1920.

(*) Dr. McCaskey intends in the near future to make a thorough investigation of all possible phases and questions bearing upon the presence of all these cases at the same time in this community.

(2) Voncken, J.: *Homohemotherapy*, J.A.M.A., 75, 307 (July 31), 1920.

(3) Bernheim, B. M.: *Blood Transfusion Hemorrhage and the Anemias*, Philadelphia and London, J. B. Lippincott Co., 1917.

(4) Karsner, H. T.: *Laboratory Problems of Blood Transfusion*, J.A.M.A., 76, 88 (Jan. 8), 1921.

volume of blood used, and a suitable needle is all the apparatus that is really required. The method is so simple that it can be carried out by anyone who understands asepsis and knows how to get a needle into a vein properly. Neither the anxiety nor the fear attendant upon single large transfusions are necessary. There need be no hesitancy on the part of the physician to withdraw several small amounts of blood from one or more compatible individuals, and certainly no layman will dread the giving up of a few ounces of blood as much as he would the loss of a quart or more.

Intravenous administration of blood is not infrequently followed by febrile reactions characterized by chill, fever, nausea, vomiting, headache, etc., that may be more or less severe. A great deal of attention has been directed to the study of these reactions, in the hope of finding out how and why they are caused, but as yet these questions have not been satisfactorily answered. They are often referred to as "citrate reactions", evidently because they are apt to occur after the use of citrated blood more frequently than after blood which is not citrated. Although it may be true that the reaction is due in part to the citrate, the latter cannot be blamed for all of it, because the same reaction does occur after the injection of uncitrated or untreated blood. It is very unfortunate that these reactions occur in spite of every precaution taken to demonstrate that the bloods of both donor and recipient are compatible and match perfectly by every known laboratory test, and that the reactions cannot be foreseen by any clinical or laboratory method available at present.

Evidence very recently brought forth⁵ indicates that probably the most important factors in the causation of these reactions are, (1) changes in the blood platelets, (2) associated early coagulative changes in the blood, and (3) possible injury to the erythrocytes by the sodium citrate. No matter whether the red cells are injured by the citrate or not, it is highly probable that some unknown chemical or molecular change takes place in the blood—either plasma, or cells, or all of it—directly after it leaves the vein of the donor, so that when it is injected into the vein of the recipient it enters not as the original native substance but as a somewhat modified foreign protein. The subsequent febrile reaction that sometimes occurs is exactly like the reaction so often observed after the intravenous injection of a vaccine or foreign protein when carrying out parenteral protein therapy. There is, indeed, no clinical difference between the febrile type of post-transfusion reaction and that which follows the intravenous injection of vaccine or foreign protein. Nor is there any clinical difference between either of

these reactions and that type of post-salvarsan reaction consisting of the same clinical features, *i. e.*, chill, fever, nausea, vomiting, headache, etc. In their clinical manifestations the reactions following these different therapeutic measures are identical. The biologic phenomena underlying the production of these symptoms may be different for each one of these measures, but, on the other hand, they may be identical, and an explanation that may clear up any one of them may also clear up the others.

The close similarity between the reaction following an intravenous injection of blood and an intravenous injection of salvarsan or neosalvarsan suggested the possibility of preventing these post-transfusion reactions by a preliminary hypodermic injection of suprarenalin chlorid. Experience with the salvarsan products already has shown that often a reaction after the use of one of them can either be completely averted or, at least, very much modified by the preliminary administration of suprarenalin chlorid. Accordingly this method was tried out with the idea of preventing the post-transfusion reaction, and while there has yet been no opportunity to use it to a large extent, when it has been used it has thus far not failed to yield the desired result. Particularly in a case of secondary anemia due to carcinoma of the cervix, in whom homohemotherapy had to be resorted to while radium therapy was being applied, was this "prophylactic" value of suprarenalin chlorid demonstrated. In this case the first donor was a son, who was used six times as donor, after which a daughter and niece were used as donors. After the first injection of 75 Cc. of the daughter's citrated blood, nothing happened. After the second injection of 100 Cc. of her blood, the mother had a moderate febrile reaction with chill. Subsequently the daughter's blood was given three more times, 4 ozs., 4 ozs., and 100 Cc., respectively but a preliminary injection of from 0.5 Cc. to 10 minims of suprarenalin chlorid was given from 20 minutes to one-half hour each time before the blood injection, and there was no reaction whatever following any of these, except a slight epinephrin reaction. After the first injection of 60 Cc. of the niece's citrated blood, the aunt had a definite chill and febrile reaction. After the next two injections of the niece's blood, 4 ozs. one time and 100 Cc. the other, there was no reaction, but following the next injection of her blood, 3 ozs., there was a rather severe chill and reaction. Thereafter the aunt was given a "prophylactic" of 10 minims of suprarenalin chlorid about 20 minutes before each of the next two injections of her niece's citrated blood, and again there was no

(5) Clough, P. W., and Clough, M. C.: Study of Reactions Following Transfusion of Blood. *South. M. & S. J.*, 14, 104 (Feb.), 1921.

reaction either time, except the slight epinephrin reaction. There has been no opportunity as yet to test this "prophylactic" in pernicious anemia to any extent, but the favorable results already obtained justify the presentation of this method, in the hope that a wide use of it may confirm or contradict its value.

CONCLUSIONS

1. An unusually high incidence of pernicious anemia is recorded.

2. This high incidence suggests that the causative agents are exogenous rather than endogenous, and that they may be similar to agents causing known infections.

3. Repeated injections of small amounts of blood apparently are of greater benefit, are safer, and are more easily given than single large injections.

4. The reaction that sometimes follows may be due to (1) changes in the blood platelets, (2) associated early coagulative changes in the blood, (3) possible injury to the red cells, and (4) to unknown changes in the blood whereby it becomes essentially a foreign protein.

5. Preliminary subcutaneous injection of suprarenalin or adrenalin chlorid is of value in the prevention of such reactions, and its use as a "prophylactic" for that purpose is therefore urged.

I wish gratefully to acknowledge my indebtedness to Dr. G. W. McCaskey, whom I assisted in the study of the cases mentioned, for his kind permission to use the clinical data here presented.

INFECTIONS OF THE HAND*

FRANK G. JACKSON

MUNCIE, IND.

Intercourse with men who labor with their hands will impress one with the vast economic loss accruing from the effects of apparently trivial local infections. The prick of a pin, a scratch from a piece of tin, or a cut from a tool will result very frequently in permanent disability that will reduce materially the productive output of the individual. Vast sums, also, are disbursed annually by indemnity companies in payment of damage compensation for permanent disabilities to these injured. Many years of a fair amount of industrial surgery have impressed upon the writer the importance of these infections. It is of importance to note that there was a time in almost every case when the very simplest procedure would have prevented disaster. The opening up and disinfecting of the slight wound would have resulted in almost immediate restoration of the injured member, and possibly without a single day's loss of time. With the present

arrangement in most of our factories for rendering first aid to injured, it should be easy to arrange for these cases to reach the surgeon in time for him to render such treatment to the case as would prevent the serious damage we so frequently see. Whatever time, however, the case may reach the surgeon, the all important thing is that he know what to do when the case reaches him. The writer is sure he has left his share of disabled hands scattered along through the years—but these cases with many seen in consultation confirm the opinion that the resulting disability usually is not due to the essential gravity of the case, but that it is due to failure to make a proper diagnosis and follow-up treatment. Every industrial surgeon should have a card up in his office admonishing him to "Make a Diagnosis".

The distal phalanges are most exposed to injury and are subject to certain infections peculiar to their anatomy.

A paronychia or ordinary "runaround" may disable a finger for several weeks and possibly destroy a nail by reason of failure to diagnose and lack of understanding of the pathological condition.

A felon is another infection peculiar to the distal phalanx owing to its anatomical structure. The pulpy end of the finger is a closed sac composed of connective tissue and fat reaching from dermis to bone. Pus from a slight injury in this shut sac would have no outlet and does great harm unless promptly opened. One should not wait for fluctuation however. This will not be found until damage has been extensive, and to wait for this means a protracted convalescence and possible permanent impairment. Having a tender, painful distal phalanx with induration and swelling limited to the phalanx—incision should be made promptly.

We shall now discuss those more serious infections which, if not treated at the proper time and in proper manner will result in disabling and deforming changes in the hand, namely, fascia space abscesses, tenosynovitis and lymphangitis. A thorough knowledge of the anatomy of the hand is essential to a proper understanding of the pathological conditions. It is therefore necessary to draw your attention to some of the important anatomical arrangements of the hand, first stating that this paper will discuss only the more serious and dangerous infections, omitting many interesting but less serious ones for lack of time.

The palm is divided into two principal fasciae spaces—the middle palmar space and the thenar space. They are separated at the middle metacarpal bone by a strong fibrous partition. The

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middle palmar space lies to the ulnar side, between the middle metacarpal and the fifth metacarpal, vertically covering about the middle two-thirds of the fourth metacarpal. It lies close to the bones, being covered in by the palmar fascia, ulnar bursa, flexor tendons and the superficial vessels. At its distal margin it closely approaches the proximal ends of the digital tendon sheaths and lumbrical canals corresponding to the middle, ring and little fingers. This proximity becomes of greatest importance in infections of these fingers. The thenar space lies to the radial side of the middle metacarpal and extends from this bone to the radial side of the palm. It is covered in by dense fibrous tissue blending with the palmar fascia and the flexor tendon of the index finger. The lumbrical canal and tendon sheath of the index finger stand in the same relation to the thenar space that the middle, ring and little fingers do to the middle palmar space and are of like importance in case of infection. The middle palmar and the thenar spaces do not overlap and only rarely do they communicate.

Most important in relation to these spaces are the position of the lumbrical canals, the tendon sheath endings and the ulnar bursa. The lumbrical canals lie on the radial side of the metacarpophalangeal articulations of the fingers and lead from their insertions proximally into the palm—the index approximating the thenar space, the middle, ring and little finger canals approaching the middle palmar space. The tendon sheaths of the fingers begin distally just beyond the distal interphalangeal articulation and terminate opposite the metacarpophalangeal articulations—the tendons having no sheaths in the palm except as indicated hereafter. The ulnar bursa is the sheath common to the flexor tendons as they pass over the wrist. A prolongation of the sheath rather frequently extends well down on the little finger tendon, often closely approaching the little finger sheath and sometimes communicating with it. One may readily understand how an infection from the little finger may extend into the ulnar bursa, and from there either force its way upward into the forearm or rupture into the middle palmar space. And, indeed, if the condition be not relieved this will be the course of the infection. The radial bursa is formed from the sheath of the flexor longus pollicis and is sometimes involved in a neglected ulnar bursa abscess.

From this brief and imperfect description of the common location of infections of the hand one may form an opinion of the probable course an infective process will take. Infections of the distal phalanges do not as a rule advance as far as the hand except in cases that develop lymphangitis. Infections of the middle and proximal phalanges when neglected will reach

the hand through the lumbrical canals, through a teno-synovitis which ruptures into one of the palmar spaces, or through the lymph channels. We find that an untreated infection of the index finger will proceed along the index lumbrical canal and into the thenar space. Or if the sheath be infected we shall have a teno-synovitis which will rupture into this space. In like manner an infection of the middle, ring or little fingers will proceed along their respective lumbrical canals or through their tendon sheaths and rupture into the middle palmar space. In case of the little finger the infection may take another course. As noted before there is a rather frequent connection between the tendon sheath of the little finger and the ulnar bursa. In such cases pus may enter the ulnar bursa rather than the middle palmar space. Infections of the thumb may open on the surface but if neglected will enter the radial bursa and create a most dangerous and disastrous situation.

We now approach the most important part of our subject, namely, the diagnosis of the various conditions arising from these various sources. Let us take a simple scratch or puncture of the index finger. If infection follow we have pain, redness and swelling of the finger, with probable localization of pus. A simple incision and drainage will restore the finger to health. Neglected a few hours and we shall find excessive tenderness along the course of the tendon sheath, most marked on the palmar surface at the metacarpophalangeal articulation. The finger is flexed and there is most intense pain on extension. These three symptoms carefully searched out will justify a diagnosis of teno-synovitis; namely, excessive tenderness over the course of the tendon sheath, partial flexion and intense pain on extending the finger. It may be that the infection has invaded the lumbrical canal of the index or middle finger, as it often extends by contiguity of tissue. Careful palpation at either side of the metacarpophalangeal articulation will elicit excessive pain at one or both of these points. Free incisions at this time will save serious trouble. If the case be seen late or if treatment have been improper, pus will have ruptured the tendon sheath or have followed up the lumbrical canals into the thenar space. There will now be much greater swelling of the hand. The thenar eminence stands out beyond the rest of the palm, ballooning out as if inflated. The dorsum, which has been markedly swollen in each of these conditions, is greatly swollen now. All the fingers are flexed partially and are spraddled out and swollen. The whole hand takes on the appearance of a boxing-glove.

Here we must apply all of our knowledge of anatomy and our best powers of observation in order to clear up the diagnosis. Note that

while all the fingers are swollen, more or less tender and are flexed, the index is purple, exquisitely tender, and evidently is affected more seriously than its fellows. All of the palm is very tender but the ulnar side of the palm has not lost its concavity. The thenar eminence is swollen greatly and protrudes abnormally into the palm. In the palm and fingers of a laboring man fluctuation rarely will be elicited by reason of the thick, hard callous and the palmar fascia. Having, therefore, a wound of the index finger with pain, redness and swelling, extending within a few hours or a day or two into the hand, with increasing severity and with ballooning of the thenar eminence, with temperature 100 to 103 degrees, and with the appearance of illness and suffering, one is safe in making a diagnosis of thenar space abscess. Having made this diagnosis no time should be wasted with poultices or local treatment. The tendon sheath should be opened. The lumbrical canal of one or both sides of the index should be incised. The thenar abscess should be opened by an incision between the first and second metacarpals, dorsally, and forceps passed through the thenar space until they impinge on the palm at the thenar crease, where a large counter opening should be made. Through and through drainage should be secured, rest in bed until convalescence is well established, hot boric fomentations until pain and swelling are reduced.

MIDDLE PALMAR SPACE ABSCESS

If the infective focus be in the middle or ring fingers the course of the infection will follow the same corresponding channels but will enter the middle palmar space. The same general and local symptoms will be present as in the thenar space abscess with these exceptions: the thenar eminence while swollen does not balloon out as in thenar space abscess. The concavity of the palm has disappeared and is replaced by a general fullness or bulging extending from the thenar eminence to the ulnar border and down to the web of the fingers.

Given a wound of the middle or ring finger with pain, redness and swelling, extending into the hand with increasing severity, with disappearance of the concavity of the hand and its replacement by well marked bulging of the ulnar side and with rise of temperature, one may safely assume that he has a middle palmar space abscess to deal with.

If the tendon sheath or lumbrical canal be involved it should be opened. Incision for opening the palmar space is made between the middle and ring or the ring and little fingers on the palm. It should begin at or a little above the flexion crease of the palm and extend well down to the web. This will miss the tendons and any important vessels. Forceps are introduced and

spread. If there be evidence of pus on the dorsum a counter incision should be made, but this is seldom necessary. In neglected cases the septum dividing the middle palmar from the thenar space may rupture. This will obscure the diagnosis but with care it can be made. In such a case both spaces should be opened and drainage passed entirely through the palm from one opening to the other.

ULNAR BURSA ABSCESS

If the infection be of the little finger it may take the same course as the middle and ring fingers. It will be remembered, however, that in quite a large proportion of cases the ulnar bursa approaches the little finger tendon sheath or it may communicate with it. In such case the infection will probably enter the ulnar bursa rather than the middle palmar space. Here we shall have the same general symptoms, but the concavity of the palm is not lost and there is no bulging of the thenar eminence. However, there will be a pronounced swelling with great tenderness over the ulnar side of the palm and extending up to the annular ligament. There will be marked swelling of the hand dorsally with flexion of middle, ring and little fingers and great tenderness over the little finger tendon sheath. Ulnar bursa abscess may be complicated by middle palmar abscess. This is one of the most dangerous hand infections.

Ulnar bursa abscess when neglected will follow certain lines. It may rupture into the middle palmar space, it may break through into the radial bursa, or more frequently pus will pass under the annular ligament into the tissues on the flexor surface of the forearm. Here it lies too deep to be detected by fluctuation. When this occurs there is marked swelling of the arm, with induration, redness and pain. The last partially or entirely disappears in a few hours. The tenderness may also become less. The condition would appear to be difficult to diagnose but really it is not.

Given a primary injury of the little finger, with pain, redness and swelling extending into the hand, with dorsal swelling and flexion of the middle, ring and little fingers, with tenderness and fullness of the ulnar side of the palm without ballooning of the thenar eminence or loss of concavity of the palm—we suddenly find pronounced swelling of the forearm with redness and induration and increased pain and we may safely determine rupture of an ulnar bursa abscess into the forearm. The marked change in the forearm together with the rise of temperature will at once call our attention to this new complication. Early incision on flexor surface on both sides of the forearm about one and one-half inches above the lower border of the radius with through and through drainage will mitigate the damage.

We may have a dorsal abscess from extension of the infection from the palm. In such case the pus passes to the distal border of the palm and overflows through the web into the dorsal area. While this may occur, in my experience it is not frequent. All of the palmar infections are accompanied by a cellulitis of the dorsum, with marked redness and tenderness and excessive swelling. This closely simulates a dorsal localization, yet it is the exception to find pus in this area from extension of the infection from the fascial spaces. It is not advisable, therefore, to make through and through drainage of the hand unless pus can be demonstrated in the dorsum. Limitation of time makes it necessary to omit reference to many of the most interesting hand infections as well as the after results of neglected or improperly treated cases.

One of the most interesting and deceiving conditions is the so called "collar button" abscess. This is made by a superficial abscess under hard callous or skin. The pus being unable to reach the surface forces its way through a small channel into the deeper layers of tissue where it spreads out. We thus have a pocket of pus superficially and a pocket of pus situated deeply and connected by a small channel, thus forming a collar-button like abscess. When incising a superficial abscess located under strong thick tissue observation should be made for an opening into the deeper tissues.

LYMPHANGITIS

It is necessary, however, to speak of that most important and dangerous infection, lymphangitis. Here we have one of the most deceptive infections. One must be armed with every resource to meet the condition and firmly withhold the hand from meddlesome interference.

Beginning lymphangitis is usually characterized by a slight trauma and small amount of pain and swelling. Various classifications have been made and a number of different forms of lymphangitis are described, but in my opinion these different forms represent varying degrees of severity and different types of infective agents and for purposes of treatment need not be considered.

In mild types we have slight pain, swelling of the hand and arm with red streaks running up the arm which are tender to the touch. The epitrochlear or axillary glands are tender and indurated. All of this may clear up promptly and in twenty-four or forty-eight hours the injured member be ready for work. A more severe type is accompanied by temperature, malaise and headache. These require rest in bed, hot fomentations and elimination. There is also a fulminant type, characterized by rigors, headache, temperature 103 to 105 degrees, with pain and throbbing in the hand and arm.

The primary injury may appear insignificant although I have observed in most of my cases of severe lymphangitis that the point of injury is slightly cedematous and seems to be infiltrated and of a peculiar grayish color. This was not true of the milder types. Here, we are liable to err by incising the swollen area, but nothing would be more damaging to the case. Cutting vessels and lymphatics opens new avenues of infection and the case becomes more grave. General management of these cases taxes our utmost resources and is too complicated to discuss at this time. Above all withhold the knife. There is the greatest temptation to "open up" something, but the great majority get well or die without any localization of pus. Lymphangitis is easily diagnosed. When this diagnosis is made we may understand that we have a grave condition to deal with. It requires rest in bed, hot fomentations to the affected arm and hand, regular elimination and good food. In a small number of cases localization of pus will be found at the point of injury, in the synovial sheath or at the epitrochlear or axillary gland.

I wish here to emphasize the importance of rest in infections of the hand. Rest in bed for all severe cases, dressed on splint and carried in a sling for less severe ones. In all infections of whatever severity I place a firm reliance on a well-fitted and well-applied splint. We do nearly all of this work under local anesthesia. Simple palmar or thenar abscess, teno-synovitis of the digits and lumbrical canals are done painlessly and successfully under local. General anesthesia is used when the forearm is to be drained or when there is great swelling of the hand requiring deep and extensive incisions.

CONCLUSIONS

1. Some one or more persons in every factory should be carefully instructed in the proper administration of first aid to the injured.
2. At the first sign of infection in the slightest of wounds employees should be instructed to report it at once and they should be sent to a surgeon.
3. A thorough knowledge of the anatomy of the parts is essential to the proper treatment of infections of the hand.
4. No time or pains should be spared in arriving at the earliest possible diagnosis.
5. Minutes are valuable in salvaging power and use of the hand and fingers after an infection has become localized.
6. Free incision and open drainage should be the rule. Do too much rather than too little.
7. Do not operate in lymphangitis until absolutely sure of localized pus and then think twice.
8. Rest in bed and the hand on a splint is one of our most saving resources.
9. Local anesthesia is most satisfactory in all but the most severe and extensive infections.

DISCUSSION

DR. JOHN W. SLUSS (Indianapolis): For a long time surgery and surgical procedures have been arbitrarily divided into two classes—major and minor. That is a custom which is pernicious and invidious and has led to the neglect of very many important conditions. For instance, these hand conditions have been classified as minor surgery, to the detriment of such surgical treatment. We cannot arbitrarily classify surgical practice in that manner. Surgery is good, bad or indifferent, and an attempt to call it major or minor is futile. One of the great merits of this paper—and it is one of merit and very timely—is the emphasis laid on the fact that treatment of these hand infections calls for the ripest surgical judgment and skill.

The doctor mentioned the fact that at some stage of these infections an operation might have been prevented. I want to emphasize the matter and methods of prophylaxis in these conditions. So many of the cases which we have to deal with nowadays are produced by machinery. They may seem quite trivial in character, and yet those which apparently are most trivial should be given careful attention.

In the matter of antisepsis I very rarely use soap and water in the treatment of the injured hand. In other conditions, especially in preparation for surgical operation, it is quite the procedure; but in the treatment of these slight hand injuries I find it usually sufficient in case the patient is a mechanic to cleanse the hand with gasoline and follow that with a liberal application of iodine. There is no class of injury so susceptible to the production of antisepsis as those of the hand, so that by cleansing the hand with gasoline and possibly following that with alcohol, next the application of iodine, and finally by the careful splinting that the doctor has emphasized, we may rest easy in the belief that the danger of infection is minimized. In case the patient is not a mechanic and his hand is not greasy or grimy, it is usually sufficient to cleanse it with alcohol and carry out the iodine and splint treatment.

But suppose your prophylaxis has been inefficient or that the infection has already developed before you get to it, a felon for example. A felon is the one infected condition about the hand which does not admit of prophylaxis, for the reason that the injury which produces the felon is usually so slight, either a scratch or a bruise or the prick of a pin, that the patient's attention is not directed to it until the damage is done. The point to be borne in mind is that the lymphatic arrangement of the last digit is quite different from that of other parts of the finger. The arrangement is such that the lymphatic dips directly from the surface down to the

periosteum, so that almost immediately following contact with infection, the infective agent runs down to the periosteum. This applies only to the distal phalanx. So almost immediately we have an acute periostitis. That is what a felon is. The result is that very shortly, unless remedial measures are applied, the infection reaches the bone and you have necrosis of the distal phalanx. That is one infected condition which requires very early incision. The essayist emphasized the fact that it is advisable in many other infections to go slow with incision, but in case of a felon if you want to save the bone, early incision down to and through the dorsum is indicated. Having established drainage it relieves the bone of strain and tension and will oftentimes very materially shorten the progress of the disease and militate against deformity, which is very characteristic of these felons. Now, another case—the infection limited to the fingers, but you have a "boxing-glove" hand that he speaks of, in which the whole hand looks something like a ham, the fingers swollen and fixed. Usually there are two things that I ask myself in such cases. First, is the infection confined to the palmar surface of the hand, or is it more than that, is it a tenosynovitis? The doctor called attention to the fact that the sheath of the tendon of the little finger and the sheath of the tendon of the thumb communicate with the common sheath above the wrist. If an abscess is palmar in character an incision such as he outlines is indicated. In my opinion if the case is a tenosynovitis with the thumb and little finger involved, additional drainage, more and somewhat different from that the doctor described, is indicated. That is, to open up the tendon sheath—I am assuming that the infection has followed a sheath to the wrist and you find the wrist swollen—cut down upon the tendon sheath and open it up and slip a slender forcep into the canal: let it follow the sheath under the annular ligament into the wrist, and then over the point of the forcep you make a counter incision. The protruding point of the forcep is made to grasp a small drainage tube which is thus pulled through the canal establishing through and through drainage of the synovial tissue without having injured any of the structures. The same technique applies to the synovial sheath of the little finger.

In the case of palmar abscess the arterial arches are to be respected especially the deep one toward the wrist joint. Incisions in the fingers should follow the middle line of the palmar surface avoiding the joints.

The details of the after and late treatment should be fully discussed but time does not permit.

DR. FRANK G. JACKSON (Muncie): In response to the last statement of the doctor I will say that if you have an abscess of the radial bursa to be opened you can open up the thumb and palmar portion, but you cannot follow it into the forearm because the motor nerves of the thenar muscles are located at the distal border of the annular ligament and they will be cut if you go through. If you have a radial bursa abscess, open the palmar part and then open the bursa in the forearm. Carry your drainage through under the annular ligament, and you will get a good hand out of it.

FRACTURE OF BASE OF SKULL WITH CONCUSSION OF BRAIN

CASE REPORT

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I

A motion picture operator, age 17, entered the hospital June 19, 1920. He had been injured in a motorcycle accident. Family and past personal history were irrelevant.

On examination he was found unconscious, lying upon his back, writhing from side to side and moving all extremities. No abrasions were found about the body. Blood was flowing from both ears and nostrils. His eyes were closed, pupils equal, dilated and reacted to light. There was no paralysis of any part of the body. The pulse was regular and strong. Cheyne Stokes respiration was not present. T. P. R. 96—60—14. The bladder was distended. X-ray showed no perceptible fracture of skull.

Immediate medication—Ice bag to shaven head; catheterization; wiping away blood clots from exit of external auditory meati; morphine; straitjacket.

II

Daily notes on the case were as follows:

Second day—June 20. Patient is very restless. Max. T. P. R. 100.4—95—22.

Third day—June 21. Nausea and vomiting. Max. T. P. R. 99—110—24. Involuntary bowel movement for the first time.

Fourth day—June 22. Patient swallows fluids and liquid nourishment. Very irrational—no memory—does not respond to questions asked.

Fifth day—June 23. Patient uncontrollable. Max. T. P. R. 98—135—24. Spinal puncture performed. Fluid normal in content—not blood stained—under increased pressure. 30 Cc. removed.

Sixth day—June 24. Patient conscious for first time. Max. T. P. R. 97.5—80—22. Responds to questions.

Seventh day—June 25. Max. T. P. R. 98.5—90—22. Spinal puncture performed. Fluid normal in content—not blood stained—under slight pressure—10 Cc. removed.

Eighth day—June 26. Max. T. P. R. 97—80—22.

Ninth day—June 27. Max. T. P. R. 97—70—20. Voids involuntarily for first time.

Tenth day—June 28. Max. T. P. R. 98—70—20. Spinal puncture performed. Fluid normal in content—not blood stained—not under pressure—10 Cc. removed.

Up to this time the mental condition of patient became very much improved. Knew name—recognized father—has gradually become quiet. Bleeding from nostrils and left ear was checked on second day. Continued to bleed from right ear until the seventh day, at which time it had become serous.

III

Eleventh day—June 29. Patient is very restless again. Mental state is not as good as preceding day. Patient uncontrollable.

During the next two days temperature, white blood count and pulse rate increases with mania.

Fourteenth day—July 2. A large swollen area over the right mastoid region and angle of jaw is discovered, resembling Bezold's abscess, but slightly anterior. The serous discharge from the swollen right external auditory meatus is now pustular. A smear and culture discloses a pure strain of staphylococci.

A mastoidectomy was performed, but no pus was found in the mastoid cells or middle ear. A blue area upon the mastoid bone made it possible to outline the underlying mastoid cells. The mastoid cells were soft, necrotic, and filled with moist clotted blood. The mastoid incision was then extended and a decompression done, but the dura was left intact. The brain was found pulsating normally and showed no signs of meningitis or brain abscess. The incision was closed to the inferior end where a cigarette drain was left. Probing in all directions disclosed no pus pocket in swelling.

During the next five days the condition of the patient remained about the same. Temperature ranged from 101 to 104. Pulse rate from 120 to 140. Swelling of neck and jaw did not recede. White cell count increased. The ear was frequently irrigated with Dakin's solution. The discharge from the mastoid incision never became pustular.

IV

Twentieth day—July 8. A deep incision is made 1 inch anterior to the angle of the jaw, and 1 inch long parallel to ramus of mandible. A large amount of thick creamy pus is extruded. A smear and culture shows a pure strain of staphylococci. Irrigation with Dakin's solution

discloses a communication between the external auditory meatus of the right ear and pus pocket.

Twenty-first day—July 9. A large swelling is noticed in the left axilla, similar to an enlarged lymph gland, about the size of a hen's egg. Incision revealed a large amount of thick, creamy pus. Smear and culture shows a pure strain of staphylococci.

Twenty-third day—July 11. A large swelling is found over the prominent portion of the sacrum in the mid line. Incision reveals 500 Cc. of thick, creamy pus. Smear and culture show pure strain of staphylococci.

Twenty-fourth day—July 12. Temperature and pulse rate gradually decreasing. Max. T. P. R. 100.5—100—26. Patient becoming more quiet.

Twenty-fifth day—July 13. Mental condition is improving. Speaks rationally. Pus still discharging from right ear and wound on cheek.

Twenty-sixth day—July 14. Patient sleeps most of time without narcotics. Has lost very much weight.

Twenty-eighth day—July 16. Discharge from ear becomes serous. Patient very much improved. Max. T. P. R. 98.5—80—22. Wheel chair.

Thirty-first day—July 19. Patient walking—is very unstable and must be assisted.

Thirty-fifth day—July 23. Patient released from hospital.

Patient returned to hospital for dressing at frequent intervals, until August 10, at which time all wounds were healed, his hearing was good, and patient was normal physically and mentally, except it be for a slight mental aberration.

THE PHYSICIAN

PATHIES, ISMS AND CULTS IN MEDICINE*

By

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With the march of progress in scientific medicine has come organization, not merely for the promotion of medical knowledge, but as well to improve the economic and moral status of the profession. The traditions of medical idealism have fostered the spirit of brotherhood in knowledge as well as promoted cooperation toward higher standards and greater usefulness of the profession. This tendency to organization in the field of medicine is not unlike that which has occurred in religious, social and political movements.

As any great movement gains momentum, influence and power, errors creep in and acquire respectability because approved and supported

by the organized mass. Tilling the soil and planting the seed bring to fruition the choicest flowers and the finest grain, but what crop is free from tares which should be plucked out and destroyed? Religion has its bigotry, politics its corruption or autocracy, society its prejudices and ostracisms, and even scientific movements may become permeated by a meshwork of self-sufficiency and arrogant exclusiveness. If medical evolution be studied in the light of this idea, it will be found that the profession at one time has been led into errors of excess by prevailing fashions; or again its established practices and traditional prejudices have made blind the vision for new truth. Organized medicine has at times been Phariseical and refused to see good in men or things outside its own household. Upon Pathies, Isms and Cults we look with that supreme disdain which utterly condemns. Our attitude toward them, instead of crushing or minimizing their influence, only establishes them in a position of respectability in the public mind. We are suspected of persecutory conduct. Erratic sects which we have ridiculed and condemned to an early death have lived on and flourished to nation-wide influence and power.

The type here under discussion comprises a following of greater or less extent, claiming superior virtue for some new method of treatment at variance with the established medical usage. Most of the advocates believe in the doctrine promulgated. The very fact of newness alleged, has its appeal, of course, to the popular fancy—a fact seized upon by the mercenary and unscrupulous. The latter assume an air of superiority and progress most offensive to the physician of broad training and fair mind. They refer to the organized forces of medicine derisively, as belonging to "the old school", with an inflection insinuating reactionary and abandoned methods of practice, whilst "the new school" stands for the most advanced achievement of science and progress.

The way of modern medical education is long and irksome; the expense very great. The physician thus trained and equipped is justified in guarding jealously the rights and privileges of his attainment. Having spent toilsome and tedious years in scientific fundamentals and clinical preparation, is it to be wondered that he looks askance at those who by short-cuts, a brief period of superficial preparation, parade themselves as competent to understand the human body, well or sick. For example they may assume to cure all the complex and widely distributed alterations of its mechanism by the so-called adjustment of a spinal vertebra. A master plumber before recognition as such, must spend two or three years as an apprentice. A locomotive fireman devotes years to observing

*Thirteenth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

the work of the engineer before he is promoted to the rank of the latter. How much more therefore should one prepare himself if he would assume to understand the most complex machine known to mankind—the human body. To assume responsibility for its care and direction without adequate preparation is the act of a pretender, whose motives are dominated by ignorance or prompted by avarice.

For attempting to elevate and standardize the conditions of medical education and practice, organized medicine has been villified, pointed to as reactionary and persecutory, and stigmatized as a medical trust bent upon cornering and strangling younger medical methods. A study of its history will show that the motives animating its evolution have been just, wise and philanthropic; concerned more in the interest of mankind in general, than the aggrandizement of the profession. But however lofty the aims or however great the total benefits, the purpose of the present article is to point out more particularly the inherent errors, most of all the prejudices which are the natural outgrowth of organized medicine. The conservatism of long usage and the consciousness of past achievement make us morally astigmatic and unable to see virtue outside the fold of regular medicine. As with those of old, we are likely to say of these sects, "Can anything good come out of medical Nazareth?" However preposterous the claims or chimerical the doctrines of medical heretics, careful study will show that some of them at any rate advocated theories and measures which in the end were acknowledged as beneficial to medical practice. Our failure in the beginning to recognize virtue in the theories advanced, led to systematic organization in protest and so the development of a sect.

In proof of the contention here made it is proposed to discuss only a few of the medical sects which have attained distinction and influence. The most ancient and respected of these coming down to our own day is homeopathy, founded by Hahnemann. He was a skilled chemist who did highly creditable work in that field. He discovered a soluble salt of mercury which is used even at the present day. That he disapproved of the polypharmacy of his time is indicated by this quotation from his writings in 1800: "Dare I confess that for many years I have never prescribed but a single medicine at one time?" Then came his specific medication with its minimal dosage. Elegant pharmacy, the palatable little pills resulted, which was an agreeable change from the nauseous compounds and large doses of polypharmacy. Homeopathy grew and flourished chiefly because the public looked upon it as a break away from the conservative traditions and practices; still more because it stood for simplicity and palata-

bility in the remedy employed instead of the bulky, nauseous compounds. Mothers favored homeopathy because the children took the little pills without complaint. These needed reforms, and not the chimerical doctrine, *similia similibus curantur*, enunciated by Hahnemann, are what gave virility and continued growth to the movement he inaugurated.

After over a century of existence the good there is in homeopathy is now being recognized by regular, organized medicine. Those who formerly marched under a sectarian banner are now welcomed to our medical societies, professional counsels and personal friendships. The tardy recognition of Hahnemann's real service to medicine was due to his erratic conduct and vain-glorious attempt to establish a "New System of Medicine" upsetting all previous knowledge and practice. His was "the only true system" he wrote. History will record that his contribution to medicine consisted in the fact that in his day he was chief protestant against the nauseating compounds of polypharmacy, as well as the vigorous exponent of simplicity in medication, including reduced dosage.

During the same period that homeopathy was developing in Europe and spreading to this continent, two other medical sects arose in America—Eclecticism and Physiomedicalism. The former as may be inferred from the name, whilst advocating the abandonment of set formulæ in practice and urging individual election of whatever is best in the treatment of disease, in reality bound itself to restricted methods of practice. Its followers advocated largely the use of botanical remedies—hence in the earlier days were called herbalists. And even to the present time, its conscientious advocates rely chiefly in practice upon so-called specific botanical products.

Physiomedicalism under the aggressive leadership of its founder Thomson, like eclecticism, stressed the use of herbal products, making great claims for the specific value of lobelia and the usefulness of hot vapor in the treatment of disease. From the latter fact they were often referred to as "steam doctors".

Both of these sects grew, not so much from their scientific contributions as the fact that they stood for protest against supposed as well as real abuses in the general medical practice of the day. However valuable may have been mercury, opium and venesection as therapeutic measures, there is no doubt but the general profession had gotten into a rut of routine in their excessive use. Ptyalism and narcotic habits were too often the result; and phlebotomy no doubt was often needlessly if not harmfully performed. Hence public sentiment was ripened to protest against the prevailing abuses of medical practice. In this atmosphere homeopathy, eclecticism and physiomedicalism flourished. As the

causes for their origin and growth have been eliminated, and the fundamental scientific standards underlying medical education have been advanced, these sects no longer find cohesive foundation for continued existence. They have become merged in the larger army of medical practitioners.

The medical sects arising in our own day and generation are quite different, except that like their predecessors all relate to therapy. In a previous essay consideration was given to manual therapy as advocated by osteopathy and chiropractic. The former has justifiable ground for existence as a protest against the failure of medical education to properly instruct students in the methods of manual therapeutics. In the case of chiropractic this is very much less true since the whole plan of relief promised for a wide range of maladies is based upon so-called spinal adjustments. Whatever virtue there may be in the method for the relief of a limited number of conditions is clouded by the brazen and extravagant claims made of applicability to a wide range of lesions, remote and unrelated to the spine. If persons of broad general education and thorough grounding in the fundamentals of medicine, as vouched for by well recognized universities and state boards of medical registration, choose to limit themselves in treatment to chiropractic methods, there should be no objection on the part of the stable, organized forces of medicine. This is fair, wise and in the interest of the public good, insuring against the practice of quackery under a new name. Then no matter what the method employed the practitioner should not err from ignorance of what he is treating; nor will he be so likely to yield to the avaricious methods of the charlatan.

The greatest of all modern medical sins of omission I reserve for last. As to its name and magnitude, let the numerical and material triumphs of Christian Science answer. The magnificent temples reared in most cities are packed with somewhat vainly-dressed devotees, proclaiming in the same breath the failure of medicine and the triumphs (imaginary or real) of a medico-religious cult.

This has all come to pass before our very eyes and in spite of our ridicule. To how many physicians has it occurred that we have brought this condemnation upon ourselves? The whole movement of Christian Science is a natural protest against the materialistic trend of modern medicine. For forty odd years the hue and cry of advancing medicine has been for a sign, a demonstration—in physiology, chemistry, pathology, and bacteriology; find the micro-organism and prove its relationship to the disease; locate the lesion and ablate it by the knife—always a material enemy to be subdued by material

means. And it must be granted that this scientific, if materialistic, method has brought to medicine its greatest glories in modern times. So intent upon demonstrable scientific achievements, the profession has not seen or properly evaluated the mental and moral factors in the cause and cure of disease. In years gone by the general practitioner was an artist in the practical application of these principles. But with the advent of specialism dividing the human body into a multiplicity of departments, to be treated in a cold, mechanical way, the practitioner lost sight of the co-ordinated, pulsing, reacting organism as a whole. Medical practice, like the practitioner, lost its soul and spirit to the tyranny of materialism. Cases in which mental treatment or spiritual ministration was indicated were still treated by material means resulting in failure, which condemned the methods employed and fed the growth of a cult. Healing through the mind, or through benignant moral or spiritual influences became a lost art. Out of the ruins of our failure a medico-religious cult has builded its temples and inculcated its teachings. Nor can it be denied that many of the followers of Christian Science have been greatly blessed and made well; just as it is equally true that many have been grossly deceived. In fact not a few are carried over the Niagara of destruction when they might have been rescued in the life-boat of scientific medicine.

A comparison of the true physician's attitude and that of the Christian Scientist toward the human body and its ailments offers some interesting contrasts. To the former the human body is a sacred temple, the handiwork of the Creator, with the organs and parts correlated and endowed with consciousness through the five senses—nerves carrying messages from without and within the body for our enlightenment and protection. It is not for us as finite creatures to say one sense is better than another—all of them enter into the program of life, to be respected and obeyed. Rarely do they deceive us. To question their mandates is to challenge the intelligence and character of deity. Through the sense of sight an approaching railway train calls us to halt lest we be hurled to destruction. A listening ear warns us of an oncoming tornado, and we seek the safety of a cellar. The fumes and smoke of a burning building arouse us from slumber in time to escape in safety. A finger accidentally touching the fire telegraphs a pain message insuring immediate removal. Thus always the benignant senses are working for us. To single out one of these and call it an evil impulse, an error, is to mock God. Yet this is exactly what Christian Science does.

The physician's viewpoint then is that the

pain sense is an all-wise provision for our protection—a danger signal that something is wrong which should be corrected. Through its warning messages we are made aware of dangers within, whether it be appendicitis, peritonitis, gallstones, bowel obstruction, beginning pneumonia, mastoid disease, brain tumor or a thousand other organic abnormalities. Yet Christian Science would place the stigma of an evil impulse upon pain, and deny it a hearing as a protective attribute of life. Medicine on the other hand listens reverently to its warnings and seeks to avoid or neutralize the impending danger.

The Christian Science attitude toward pain is both irreverent toward deity and characterized by a dishonest and demoralizing complex of pretensions. Instead of frankly admitting pain, but bearing it with heroic fortitude, they audaciously distort the truth. Every word and act must support the dogma, that pain, physical or mental, has no real existence. The true devotee dares not confess to himself or others the possibility of pain. The result is that deception, conscious or unconscious, becomes with them the almost universal practice. It may be a successful psychological method of helping to endure suffering, but it is misrepresenting the truth nevertheless.

To prove that their conduct is such, one needs but to attend a Wednesday night experience meeting; or scan the testimonials of any Christian Science paper. Hide-bound political papers are partisan and prejudiced enough in their expressions, but bear only mild comparison to Christian Scientist journals. Their public reports of treatment are universally favorable—no other would be acceptable. They read like the testimonials of a quack doctor. If someone arose in open meeting honestly acknowledging failure of "Science", such would be *persona non grata*. Would any healer have the honesty or courage to admit failure of the dogma amongst his clientele—for example in cases of uremic and diabetic intoxication; from typhoid fever and tuberculosis; from organic nervous diseases, cancer and sarcoma; from the malignant infectious diseases of infancy and childhood, such as diphtheria and scarlet fever? Duplicating the experience of almost every general practitioner, I have been called to cases of these disorders when *in extremis*, in whom "Science" was given a chance and failed ignominiously. Contrast the Christian Science attitude with that of a group of medical men assembled in discussion of cases. The conscientious physician is just as faithful in reporting his failures as his successes. Any other attitude on his part would be viewed with suspicion which would visit upon him merited condemnation.

Besides inculcating the habit of prevarication Christian Science fosters another moral delinquency—the hardening of the heart toward the unfortunate. It robs life of its sympathetic touch. It takes the very essence out of the teaching of the Great Physician. Has Christian Science ever founded a hospital for unthinking little children incapable of comprehending dogma? Or has it volunteered sympathetic mercy or generous support to that great company of the afflicted who are down and out in the life struggle—not so much from evil intent as from heredity, environment or the scourge of infectious diseases, as real and as terrible as fire or flood?

In no particular is Christian Science so inconsistent in conduct or reprehensible in action, as in its repudiation of organic diseases, especially the infectious maladies, acute and chronic. The devout "Scientist" dusts Paris green upon potato plants to kill beetles, sprays rosebushes to destroy slugs, and sorts rotten apples out of the barrel, knowing that a few bad ones will soon contaminate the whole mass. Meat and butter are kept in the ice-chest to inhibit germ growth. The jars and fruit are boiled before canning, to destroy bacterial growth. Had the mind of the potato, the rose-bush or the fruit fallen into "error" or were they being preyed upon by parasites, which it should become the highest duty of man to learn about through true science, and combat by intelligent means? Or turning to the lower animal kingdom, does the devotee of this cult condemn the mind of the dog for having fleas; or will recourse be had to insect powder? When did the minds of swine fall into error that they should die of plague? These homely if forceful illustrations are given to make plain what is true of most Christian Scientists, namely, that in the disorders of lower animals and vegetable life, they follow the dictates of reason and common sense; but when it comes to the ills of human kind, they shut their eyes to facts.

The writer's experience with cases in illustration of the point may be duplicated again and again in the practice of others. I came once into a family where one child lay dead of diphtheria and two others were in dying condition—innocent victims of a misguided belief. Repeatedly I have been called to patients, *in extremis*, suffering from toxic convulsions, uremic or diabetic coma—conditions in which by proper regulation life might have been prolonged if not a cure effected. Innumerable are the cases of pulmonary tuberculosis who have been told to go their way, chasing the fatuous hope of a dogma, frittering away golden time when by intelligent management disease might be

arrested—dallying until hectic fever and weakness overwhelm them. Almost daily I pass upon the street a man who wears a disfiguring shield over a ghastly opening where his nose should be—a horrifying testimonial to the failure of "Science"—once an ulcerative, destructive lesion which I saw heal in three weeks' time under the administration of iodides. What practitioner has not seen the woman with mammary cancer deluded by the promises of this erratic belief until metastases had converted a curable into a hopeless condition?

Opposed to organic diseases are the functional group. All intelligent physicians will admit that many stresses of mind and spirit beget most uncomfortable states of existence—with various organs awry in their functioning capacity. What mental equilibrium is so stable as to be undisturbed by the sudden death of a very dear relative, the discovery that a trusted friend has proved false, the collapse of one's business or the failure of a pet ambition? Let these impulses of assault on the sensorium be multiplied and repeated indefinitely in harrassing succession. There results a short-circuiting in the mental exchange, wrong messages and explosions which produce disturbed action of various organs. These constitute functional diseases, and their relief must be obtained largely through mental, moral and spiritual agencies. Here is where Christian Science finds a legitimate opportunity. In such cases it often does afford relief. Let us frankly acknowledge the truth, giving credit where credit is due. In fact, does not growth of this sectarian organization represent a protest against our sins of omission? The very brilliancy of the revelations of modern pathology with their vast bearing upon surgery and medicine, has blinded the profession to the significance of the mental, moral and spiritual factors in the cause and cure of disease. Here is where medicine needs an awakening if it would prevent Christian Science from taking over a neglected field.

On the other hand, to the votaries of this medico-religious sect who assume to cure organic or infectious diseases, we should give no quarter. Highest duty calls for exposures of such fallacies, not so much by vituperative attack as by kind and sympathetic reasoning. In seeking to make plain the danger of the dogma, let us not ourselves become bigots. On the contrary it is a false reserve upon our part to excuse their dallying with organic, notably the infectious diseases. If mankind were to follow the dictum of Christian Science in ignoring natural phenomena or symptoms of disease, one may pertinently ask, why should we strive to discover *any* of the hidden truths of Nature? Has it availed nothing for civilization that Franklin brought down the lightning from the

clouds; that Morse refined and applied this knowledge in the electric telegraph; that Edison through study and investigation made it do the practical function of illumination? Is it any less a proved scientific demonstration that Koch discovered the cause of tuberculosis; that Morton and Simpson proved the practical value of chloroform and ether as anesthetics relieving pain; that Biehling in diphtheria antitoxin perfected a cure for that dread disease of childhood? Are not all of these revelations from the Creator's book of Nature? If scientific truth is not to be trusted in medicine, why not deny it credence in all other fields? If the whole world accepted and practiced the dominating thought of this cult, it would lead inevitably back to the ignorance and barbarism of the primitive races.

So long as Christian Science confines its activities to a cheerful optimism which does not ignore aching hearts, or forget the touch of human sympathy for those in pain, poverty or sorrow; when it counsels fortitude to bear pain and suffering without practicing deception about them; when by earnest prayer, heartening words and deeds, it inspires the depressed and discouraged to hope, faith and resolution; when it distinguishes between organic and functional disorders, limiting its activities largely to the latter—when Christian Science performs these kindly ministrations, without money and without price, untainted by selfishness or the suspicion of commercialism—medicine has no quarrel with it. In this role, like any other religious sect which has won a place in the world's confidence it should continue to survive and flourish.

A few medical men are capable of handling the delicate questions relating to the mental, moral and spiritual phases of disease with infinite tact; more are inclined to shirk the responsibility, turning it aside with bluff words or silent contempt. To be able to treat them with success often requires the gift of spiritual insight, the finest wisdom and the most inspiring courage—accomplishments more difficult to acquire than the writing of prescriptions or the wielding of the knife. Shall we not more frequently cultivate the science and art of psychology as applied to medical practice? Is it without the province of opportunity and duty in the art of healing for the physician to bring to his aid the stimulating and uplifting effects of religion, if this will help the sufferer? If not ourselves able to instill calm and hope into a perturbed soul, should we not more frequently counsel those who by prayer or inspirational contact can arouse wholesome reactions of the spirit—bringing about functional and organic improvement? By so doing we shall fulfill to a higher degree the ideals of a well-rounded professional achievement and avoid the excuse for the development of medico-religious cults.

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EDITORIALS

**THE STATUS OF VACCINATION
AGAINST INFLUENZA**

Prophylactic vaccination against influenza was practiced extensively during, but mostly following, the recent epidemic of the disease. From a scientific point of view, such inoculation seems somewhat premature, since the etiologic factors are not established. In some districts stock cultures were employed; in others a culture of a strain or strains isolated during the epidemic, and in still others a mixed vaccine composed of the bacillus of Pfeiffer, the streptococcus, the pneumococcus, the staphylococcus and other organisms. McCoy presented his impression, as gained from the uncontrolled use of these vaccines, that while theoretically they might be of value in the prevention of influenza, yet in every case in which they were tried under perfectly controlled conditions they failed to influence either morbidity or mortality. A well conducted investigation is worthy of note even when the outcome is negative in character. It may turn us away from false hopes and force us to seek new solutions for the problem at hand. In an elaborate study, Jordan and Sharp of the Department of Hygiene at the University of Chicago conducted observations under the auspices of the influenza commission established by the Metropolitan Life Insurance Company of New York on approximately 6,000 persons from November, 1919, to June, 1920. About one-half of these were vaccinated with a saline suspension of a standard mixed vaccine prepared by Dr. W. H. Park of the New York City health department. The remaining half were not vaccinated. Comparable members of the two groups in different localities lived under essentially identical environmental conditions. The influenza attacks among the vaccinated numbered 118, or 4.1 percent; among the unvaccinated the morbidity from this disease was 4.8 percent. Rhinitis and bronchitis developed with about equal frequency in the two groups. There were slight variations in the incidence of the few cases of pneumonia, but the Chicago bacteriologists regard it as unlikely that any considerable degree of protection against influenza was conferred.

Is it unfair to the proponents of vaccination against influenza and other respiratory infections to say: "Value unproven"?—*Jour. A. M. A.*, May 28, 1921.

PHYSICAL EXERCISE FOR THE PROFESSIONAL OR BUSINESS MAN

Physicians as a class are not infrequently the target of public criticism. This is not necessarily an uncomplimentary attitude and often means quite the reverse. The greater the responsibility and the closer the touch to public welfare an individual or an institution maintains, the more critical the public becomes of its activities. Hence, the barber or the plumber is seldom disturbed in the discharge of his duties by the clamor of public criticism. On the other hand, the community expects a great deal from their doctors, and if a doctor sometimes fails to measure up to their ideal of usefulness, as no doubt he often does, he should not be piqued by their criticism, but rather diligently search for the cause of his failure and remedy his defects. Among other things doctors have been accused of entertaining a very narrow point of view, not only in relation to the problems of individual life but to community life. The ills of mankind occupy the entire field of the doctor's vision, so it is said, to the exclusion of many closely related activities and interests of his fellow men.

About a year ago, one of our professional friends became personally very much interested in the question of physical exercise. He had been operated only recently for a condition which he strongly believes had been brought about by a lack of adequate physical exercise. Having, during his convalescence, plenty of time and a good opportunity to evaluate his physical assets, he arrived at the conclusion that he had been almost criminally negligent of a very fundamental and prime essential to good health. He made up his mind that the triad of physical liabilities—too many calories of food, too much tobacco and sedentary habits, under which he had been laboring, should be liquidated at least partially. We say partially, because he still smokes, but he joined a good athletic club, and ever since has been reaping the benefit in an improved physical condition which almost spells rejuvenation. It is his firm belief that his experience parallels that of a great many men who have arrived at the fourth decade of life, men who live in our cities and whose work keeps them in the office or at the desk the entire day.

Adequate physical exercise cannot be regarded as a necessity to existence, like oxygen or water—perhaps it is unfortunate that it is not, since it would not be so neglected. One does not have to paint his house or mow his lawn

in order to live in a fair degree of comfort, but he will do both if he realizes the full value of his property.

The "tired business man" is no myth. His number is legion. If he did not constitute a large class in urban society, patent medicine vendors would not be so constantly appealing to him. What he needs is not less work but more work—physical work—something that will empty lymph spaces of stagnant fluid that fails to properly nourish his cells.

There are three kinds of exercise available for the business man whose daily duties do not afford him sufficient muscular work. Exercise in which he at the same time is accomplishing some useful occupation, such as gardening, taking care of his premises, his automobile, etc. There is much to be said for this, especially in such a crisis as the world is just now passing through. This kind of exercise is not attractive to the average business man. He does it, if at all, from purely economic motives, when, as a matter of fact, the greatest benefit he derives is its excellent effect upon his health.

Another kind of exercise is that obtained by engaging in competitive games or sport, such as golf, tennis, etc. This appeals to every normal man. It must not be forgotten, however, that the real object of the game is not the winning but its playing. The man who is beaten gets just as much out of it from a health standpoint as the one who wins. For those who must have their exercise served with sugar to make it sufficiently palatable to masticate, competitive sports are a great boon.

And, finally, we have exercise unadulterated, with no other object than the workout. This is afforded either by individual effort in the home, or attendance on gymnasium classes in athletic clubs. This, we believe, is an absolute necessity, especially during the winter months, if the business man of 35 to 55 years is to keep himself in good physical trim. This kind of work is ideally suited for men of this age. The aim is to bring into moderate activity large groups of unused muscles, rather than sudden and violent use of smaller and more frequently used groups. The objection to this type of exercise is that it is not particularly interesting, and it requires a degree of self discipline in faithful and regular performance that the average man seems unequal to—perhaps in the interests of brevity and truth, one might say he is too lazy.

Broadly speaking, doctors are interested in the development of a strong and vigorous race. They are the only class in the community who have the educational basis to understand the fundamentals whereby this can be accomplished. And yet it is safe to say they have not interested themselves in the question of physical education.

A recent inquiry of thirty (30) active members of gymnasium classes revealed that only three (3) had undertaken the work on the advice or suggestion of a physician. The business men who comprise these classes have but one object in view when they undertake this work and that is: health conservation. The medical profession, which they have a right to expect to assume leadership in all questions affecting the health of the community, has had but little to do in directing them in this extremely important matter of physical education.

THE SHEPPARD-TOWNER BILL

The Sheppard-Towner bill, as amended, now provides for the appropriation of \$1,480,000; \$10,000 is to be paid to each state, and \$1,000,000 is to be apportioned among the states in proportion to their population, no part of the prorated amount to be paid until an equal sum shall have been appropriated by the legislature of the state for the purposes provided for in the act. The Children's Bureau is made responsible for the administration of the act; the chief of the Children's Bureau is directed to form an advisory committee consisting of the Secretary of Agriculture, the Surgeon General of the United States Public Health Service and the United States Commissioner of Education. Not more than 3 percent of the total appropriation may be used for administration expenses. Any state desiring to avail itself of the benefits of the act must submit to the Children's Bureau a detailed plan for instruction in the hygiene of maternity and infancy through public health nurses, concentration centers and other suitable methods. To meet the objections of the advocates of personal liberty, an amendment provides that no state official or agent or any of the employees of the Children's Bureau shall have the right to enter any home over the objection of the parents. The Senate Committee on Education and Labor on May 20 reported favorably on the bill as amended, the report being practically the same as the report of the Senate committee on the same bill in the last session of Congress, and repeats the statement that the United States stands seventeenth among civilized nations in the maternal death rate, and that most of this loss could be prevented by proper prenatal instruction.

As already stated in previous issues of THE JOURNAL, we are opposed to the Sheppard-Towner bill, and except for a few spasmodic efforts here and there among medical men, there has been little support of the Sheppard-Towner bill from the medical profession. In fact the medical profession as a whole probably is opposed to the bill, and for the reasons already

stated in *The Journal of the A. M. A.*, which are as follows:

(1) The principal of federal state aid as a means of financing public health work is an unsound financial policy.

(2) Public health work, except those activities which are clearly national in character, is essentially a function of the state and local government and should be paid for out of state and local funds.

(3) No such emergency exists as has been claimed and there are no reliable statistics by which it can be proved that the United States stands seventeenth in maternal death rate.

(4) The means provided in the bill will not afford an effective remedy for existing conditions.

(5) Most important, if the federal government intends to inaugurate activities for the care of maternity and infancy, or for any other public health measures, such work should be placed in the hands of the United States Public Health Service rather than under a bureau of the Department of Labor.

NATIONAL HOSPITAL DAY IN INDIANA

The first observance of National Hospital Day exceeded even the fondest hopes of the most enthusiastic committeemen. Never before was hospital service brought before the public in such an interesting way and with such force. According to reports which we are now receiving, the observance of the day was quite general in Indiana as well as throughout the United States and several provinces in Canada. Forty-eight States and five Canadian Provinces were actively organized in promoting the observance of the occasion. Hospital executives are unanimous in the opinion that the idea of National Hospital Day is a splendid one and that the project should be perpetuated. It is felt that National Hospital Day offers a splendid means of arousing the public interest in hospitals in the work they are doing by encouraging the general public to visit institutions at a particular time. It is realized that the focus of public attention on hospitals at a particular time will result in many persons visiting hospitals and becoming interested in hospital activities who otherwise could not be reached.

Many reports have been received from over the State regarding the observance of the day.

At the National Home for Disabled Volunteer Soldiers, Marion, Indiana, the hospital authorities report Hospital Day was exceedingly pleasant and satisfactory; approximately five hundred people from Marion and surrounding districts visited the hospital. The authorities of the hospital are enthusiastic over the possibilities of National Hospital Day and encourage the perpetual observance of the occasion.

The King's Daughters Hospital of Madison reports National Hospital Day was well observed by the town people; so much that officials are heartily in favor of making it an annual occasion.

The Wells County Hospital states that a splendid response was had at Bluffton.

The San Antonio Hospital at Gary indicates that hundreds of persons visited their institution during the day and that a program of demonstrations was given as a part of the observance; also the Illinois Steel Company Hospital at Gary joined in the movement.

The Bedford Hospital observed the day by carrying out a very interesting program of demonstrations, served refreshments and gave favors to visitors who numbered several hundred. Volunteer offerings were received by the hospital, both in cash and canned fruits and vegetables.

St. Edward's Hospital at New Albany reports that the general public responded very enthusiastically. The hospital was assisted by the Ladies' Auxiliary in receiving visitors and conducting them to various parts of the hospital. They urge that Hospital Day again be observed in 1922.

The Methodist Hospital in Fort Wayne observed the day in a very auspicious manner.

The St. Joseph's Hospital, Fort Wayne, held open house to several hundred callers, and gave out souvenir booklets illustrated with hospital views, photographs of the staff members and giving a history of the hospital.

The Fort Wayne Lutheran Hospital threw open the doors at the Hospital and Nurses' Home, and report that large numbers visited the institution. In the evening a musical program was given at the Nurses' Home. The hospital issued folders which were distributed to all visitors there.

The Good Samaritan Hospital at Kokomo reports a splendid response to the occasion and states that the observance of the day was of great benefit in arousing the interest of High School girls in the Training School of the hospital. A committee of ladies assisted the hospital, both in cash and canned fruits and vegetables.

The Hamilton County Hospital issued cards of greeting and served refreshments to the guests and reports that in spite of rain had a very good crowd.

The Holy Family Hospital at LaPorte considers the day a huge success; several hundred people visited the institution and were given a clear insight into the work of the hospital.

The St. Joseph's Hospital at Mishawaka observed the occasion by distributing pamphlets on "Nursing" and "Hospital Work" and showing several hundred visitors through the institution. The annual dance of the nurses was

held as a part of the observance of the day to which the public was invited.

In Terre Haute both the Union and St. Anthony's Hospitals drew large crowds of visitors. At St. Anthony's the Nurses, Sisters and Staff had a parade about the building and grounds which attracted considerable attention and in the evening the Nurses held a reception. At the Union Hospital many girls of the graduating classes of the different High Schools in Terre Haute attended demonstrations given by the Nurses. Refreshments were served and the hospital authorities feel that great interest was aroused which will eventuate in many additional applications for the training school.

In Lafayette the day was observed at both the Home and St. Elizabeth Hospitals and several hundred visitors took advantage of the occasion and visited the hospitals. The St. Elizabeth Hospital issued a pamphlet describing the work being done by the hospital. Both hospitals are enthusiastic as to the possibilities of National Hospital Day as a permanent institution.

The St. Joseph Hospital at Logansport considers National Hospital Day a big success; the Advisory Committee of the hospital and the ladies of the hospital sewing circle acted as a reception committee in showing visitors through the hospital. The occasion at Logansport was given considerable impetus by a proclamation of Mayor James I. Barnes for National Hospital Day.

In Indianapolis hundreds of visitors were shown through the various hospitals; the occasion was observed very successfully at the Methodist, St. Vincent's, Deaconess, City and Robert W. Long Hospitals. The Sunnyside Sanatorium held a special program for a large group of Public Health Nurses who visited the institution as a part of the program of the State meeting of the Association of the Public Health Nurses. The Staff of the Robert W. Long Hospital was very enthusiastic over the large response of the general public in visiting the institution. The students of the training school gave a play during the evening portraying the various phases of the training of a nurse. This entertainment was open to the general public.

Many other hospitals observed the day and all feel that bigger and better observances of National Hospital Day can be held next year.

Following is a list of the State Committee for Indiana, whose efforts brought about such a wide and enthusiastic observance of the day in this state:

ROBERT E. NEFF, Administrator Robert W. Long Hospital—State Chairman.

LEMUEL BOLLES, National Adjutant, American Legion, Indianapolis.

AMOS W. BUTLER, Secretary Board of State Charities, Indianapolis.

DR. W. L. BRYAN, President Indiana University, Bloomington.

DR. CHAS. N. COMBS, Superintendent Union Hospital, Terre Haute.

DAVID E. COX, President Board of Trustees, Randolph County Hospital, Winchester.

DR. W. H. DAVIDSON, Walker Hospital, Evansville.

WM. FORTUNE, Chairman Indianapolis Chapter, American Red Cross, Indianapolis.

DR. ALFRED HENRY, President Board of Control, Sunnyside Sanatorium, Indianapolis.

DR. EDNA G. HENRY, Director Social Service Department, Indiana University, Indianapolis.

DR. JOHN N. HURTY, Secretary State Board of Health, Indianapolis.

WILL G. IRWIN, Bartholomew County Hospital, Columbus.

DR. GEO. F. KEIPER, St. Elizabeth's Hospital, Lafayette.

HUGH MCK. LANDON, Vice Chairman, Joint Committee James Whitcomb Riley Association and Board of Trustees Indiana University, Indianapolis.

MISS MARY A. MEYERS, President Indiana State Nurses' Association, Indianapolis.

DR. T. W. MOORHEAD, St. Anthony's Hospital, Terre Haute.

DR. WM. MCLAKE, Medical Director and Supt., National Home for Disabled Volunteer Soldiers, Marion.

WALTER E. PITTSFORD, Governor Rotary Clubs of Indiana, Indianapolis.

DR. MILES F. PORTER, St. Joseph's Hospital, Fort Wayne.

JOSEPH REITEMEIER, Chairman Advisory Board, St. Joseph's Hospital, Logansport.

MRS. E. C. RUMPLER, President Indiana State Federation of Clubs, Indianapolis.

DR. DAVID ROSS, President Indiana State Medical Association, Indianapolis.

JOHN L. RUPE, President Board of Trustees, Reid Memorial Hospital, Richmond.

B. M. SMITH, Superintendent Muncie Home Hospital, Muncie.

MRS. MARCUS R. SULTZER, The King's Daughters Hospital, Madison.

DR. H. J. WHITE, Chairman Executive Committee, St. Margaret's Hospital, Hammond.

EDITH G. WILLIS, Supt., Good Samaritan Hospital, Vincennes.

DR. CHAS. S. WOODS, Supt., Methodist Episcopal Hospitals of Indiana, Indianapolis.

EDITORIAL NOTES

THE action of the House of Delegates of the Ohio State Medical Association, in accepting the recommendation of the retiring president that the medical profession put aside its conservative policy and utilize the press to the fullest possible extent in teaching the people the things they ought to know about their life and health, shows that the medical profession is awakening to its responsibility. Many pseudo medical cults are utilizing the public press extensively in the publication of glaring, misleading statements concerning the human body in sickness and health, and the medical profession has rested complacently on its ethical conservatism without giving to the public the truth. It is about time that the medical profession arises to its responsibility.

INVESTIGATION carried on at the Leland Stanford Medical School by Dr. J. H. Mehrrens, aided by an appropriation from the Scientific Research Fund of the U. S. Interdepartmental Social Hygiene Board—a report of which was published in *The Journal of the A. M. A.*, February 26, 1921—has shown that much larger doses of neo-arsphenamine may be tolerated when given intrarectally than was heretofore considered safe. These massive doses produce greater amounts of arsenic in the blood, and cause arsenic to remain in the blood over a longer period, than does the intravenous method of administration. These investigators still advocate the intravenous injections as the method of choice, and suggest that the intrarectal route be substituted when for any reason intravenous administrations may be contraindicated.

DESPITE all of the careful investigations concerning the use of stock vaccines in the treatment of various sub-acute and chronic affections, conducted under suitable checks, many members of the medical profession continue to believe the exaggerated and misleading claims put forth by manufacturers who are quite willing to distort the truth for financial gain. The trouble with the manufacturers is that they are troubled with mental astigmatism in that they are not inclined to see anything outside of the axis which offers distinct advantage to themselves. We are very well satisfied that there is much merit in auto-genous vaccines, intelligently used, but we are decidedly opposed to the practice of those doctors who railroad their patients into receiving stock vaccines for so many of the ills for which manufacturers claim that stock vaccines are indicated.

WE are informed that the Indiana State Board of Health has advised the various municipal

and county boards of health in Indiana that in microscopically examining a smear from a culture taken from a suspected diphtheretic throat, if one diphtheria bacillus is found in the field, the case should be called diphtheria, and, by inference, we suppose that this means that the suspected case must be quarantined. If the State Board of Health sticks to this ruling, there are going to be a lot of cases quarantined that are not suffering from diphtheria and under no consideration could be considered as disease carriers. Furthermore, we may say that if the State Board of Health is going to quarantine every patient from whose throat a single diphtheria bacillus could be found, it would be necessary to quarantine four-fifths of the people in every city and town in the state if all the people were examined bacteriologically. With all due respect to the findings of the laboratory, we believe that the clinical manifestations should be given due consideration.

A GREAT many of the Utopian ideas of the uplifters and reformers are accepted by people when only one side of the story is heard, or, in other words, until the ideas have been thoroughly analyzed. This is especially true of all the arguments put forth for compulsory health insurance and state medicine in whatever guise they are offered. The unfortunate phase of the situation is that a few medical men, in some instances prominent in the medical profession, have become advocates of these schemes for furnishing health insurance and medical and surgical care with little or no expense. When we come to consider the reasons why these medical men have fallen in with false gods, we readily discover that they have nothing to lose by such a stand. In fact they seem to be courting the publicity or even the notoriety attached to the position of sponsor for Utopian and impractical ideas. We hope that none of the rank and file of the medical profession will be led astray by the specious arguments of these erstwhile leaders, who, financially independent and quite willing to exploit their professional brethren, have only personal ends to serve.

IT is the height of absurdity for anyone to try to make out that beer or alcoholic beverages of any kind are a necessity for medicinal purposes, and it goes without saying that the present propaganda in that direction comes from the breweries and not the medical profession. Even medical men who formerly used alcoholic beverages in moderation would not advocate it as a necessity in the practice of medicine. Of course we are compelled to admit that there are a few doctors who do not follow the straight and narrow path (even as there are preachers and priests who deviate from the narrow way)

and who may be willing to "sell their birth-right for a mess of pottage," but not all, and the medical profession as a whole has been injured in the eyes of the public because a few of its members have not the moral stamina to live up to the trust placed in them. Physicians, individually and collectively, should let it be known in no uncertain manner that this demand for the manufacture of beer and other malt liquors for medicinal purposes has not come from the medical profession, and that the medical profession as a whole is opposed to legalizing the manufacture of such in the name of medicinal therapeutics.

A NEW form of fraudulent advertising by so-called "spectacle houses" is appearing rather widely in publications which reach either the rural population who are remote from competent oculists or opticians, or the more ignorant and poorer classes who are easy to convince that they can save the expense of an oculist's examination and prescription by dealing with these advertisers. The advertiser offers to "fit glasses by mail", and following is a sample of the misleading advertisement:

NEW EYES FOR OLD

"NEW VISION" is the name of these glasses and New Vision is what they give you. They will enable you to do things you had long given up hope of ever doing, such as reading the smallest print, thread a needle, work, read or sew by daylight or lamplight, and see clearly at a distance or close-up. (With them even the fine print in the Bible can easily be read.)

Words alone can hardly express what these glasses will do for you, therefore, I want you to prove, yourself, by actually wearing and testing them in every way possible, that they are just the glasses you need.

Then follows an offer to send glasses on free trial with the privilege of wearing for twelve days before paying the sum asked for them. Lastly follows a coupon which the reader is asked to fill out and send in as an order. This coupon is supposed to convey the information on which the optician of the "Spectacle House" acts in prescribing the proper lens. On this coupon the only information requested is the age of the person, and how long he has used glasses, if ever.

The Associated Advertising Clubs of the World has sent out a circular warning people against such advertising, and mentions the names of three such firms whose advertising has been brought to their attention: The Chicago Spectacle House, 1462-1466 West Madison Street, Chicago; The New Vision Spectacle Shop, 1201-1209 West Van Buren Street, Chicago; and The St. Louis Spectacle Shop, St. Louis, Missouri. Physicians are advised to offer a word of warning against the patronage of such firms.

THE Missouri Legislature in annual session passed a bill which struck out of the medical practice act the word "reputable" as related to medical colleges, and substituted therefor the words "legally chartered". In spite of vigorous protests, the governor signed the measure. The words "legally chartered" are entirely without meaning since the worst diploma mills that ever existed have been chartered. In the majority of States it is easy for any group of individuals, no matter how irresponsible they may be, to secure a "legal charter" and to open a "school", "college", or "university", with full power to grant any or every degree in the category, no questions being asked as to whether they have the essential teachers, buildings or equipment, or the funds necessary to furnish the education usually required for such degrees. The word "reputable" on the other hand gave the State Board authority to enforce reasonably high standards of preliminary and professional education and to refuse recognition to any institution which on due inspection was found to be deficient in these respects. Missouri for the last few years has stood among the States in which practice acts have been fairly well enforced, and in which the public has been well protected against incompetent physicians. The present amendment to the practice act places the State in a position as bad as, if not worse, than that which existed twenty or more years ago. In this day of greater educational enlightenment the passage of legislation of this character by any State in the Union is surprising, to say the least. As the *Journal of the A. M. A.* (April 30) suggests, in spite of this handicap the Board, by holding a fairly rigid examination can still do much to weed out the incompetents if the governor will appoint competent examiners on the Board and support them in their work. We rather doubt any such action on the part of the governor, however, in view of the precedence established in originally signing an amendment with a standard so lowering.

THE report of the Committee on Public Policy and Legislation of the Iowa State Medical Society contains a commentary on the cheapness with which life and health in Iowa is held in the following:

"The advocates of better health laws have considered that human life is of more importance than the lives of farm animals, and asked the legislature for pure milk for the children, and the request was turned down, but, when it was demonstrated that tuberculosis in the herds was killing off the pigs which drank the same class of milk furnished the children, then the legislature had no hesitancy in making an appropriation of \$250,000 to clean up the euberculosis from the farm, in order to save the life of the pigs; and the U. S. Government provided another \$250,000, making \$500,000 for the two year period. A few days later the same legislature hesitated to appropriate an increase of \$5,000 to the

board of control, making a total of \$10,000, for an educational campaign against the ravages of tuberculosis in the human family."

In the days of slavery in the South the colored people were counted as chattels and worth real money. If slavery existed today, and it could be pointed out that the slaves were in danger of being wiped out, or their health and working ability impaired by disease, it is a safe bet that legislators would appropriate enough money to protect the slaves to the fullest possible extent. It seems too bad that the average legislator cannot be made to understand that health in human beings is a monetary asset, not only to the individual himself but the community at large. Therefore, money spent to stamp out diseases in the human being is well spent, and in fact public health and sanitation is an economic problem and should be divorced from all ideas of sentiment. The average legislator trembles with fear when he thinks of the criticism that will be heaped upon his luckless head if he fails to promote legislation that will save 500 hogs from death from hog cholera, but he never bats an eye when he is told that some disease threatens to wipe out of existence 5,000 human beings, and that a little work on his part may help to avert the disaster. Hogs represent real tangible dollars, but to the average legislator human beings have no monetary value. We are under the impression that most of the work done with our legislators concerning health laws is free from the economic argument. The thing to do is to put the matter on the basis of dollars and cents, for that is the only thing that appeals to the average legislator.

For a number of years the Council on Pharmacy and Chemistry of the A. M. A. has been urging physicians to avoid using proprietary trade marked names when prescribing drugs or chemicals obtainable under non-proprietary names. Two chemicals have been especially referred to in this connection: Hexamethylenamin and Acetylsalicylic acid. Hexamethylenamin, known to be an effective therapeutic agent especially as a urinary antiseptic, was commercialized by a firm of manufacturing chemists under the name "Urotropin" and widely advertised. As a result "Urotropin" has become so impressed on the minds of physicians that many have been unable to eradicate the term from their minds and still use it in prescribing this drug. Acetylsalicylic acid also was patented and the trade name "Aspirin" coined for it by the predecessor of the Bayer Company. The seventeen years of exclusive monopoly and privileged advertising made an impression on the minds of physicians, and also on those of laymen who had become used to seeing the word "Aspirin" in physicians' prescriptions. As a result when

the patent expired, although numerous preparations of this drug were made available under the true and descriptive name. Acetylsalicylic acid, physicians continued to prescribe the drug under its coined name. The Bayer Company, who eventually acquired the rights in this product, has conducted a strong advertising campaign in the newspapers that leaves the impression on the lay mind that there is no satisfactory aspirin except aspirin (Bayer). Among the manufacturers who came into the market with this drug on the expiration of the Bayer patent was the United Drug Company. The owners of the Bayer product brought suit against the United Drug Company to prohibit the selling of the latter's product under the name "Aspirin". The United States District Court of Southern New York recently rendered a decision in this matter which is of importance to physicians. The ruling of the Court notes that acetylsalicylic acid is known as such to manufacturing chemists, pharmaceutical houses, pharmacists and physicians, so that to them the word "Aspirin" signifies only the product of Bayer origin, whereas the term "Acetylsalicylic acid" is unknown to the average lay mind, though the term "Aspirin" is used. The pharmacist, therefore, according to the Court's ruling is justified in supplying a layman who asks for aspirin with acetylsalicylic acid tablets of any reputable maker. But the Court rules—and physicians are urged to make note of this point—that *when a physician writes aspirin in a prescription, only the Bayer product can be supplied*. Unless a physician wishes to cater to the concern owning the Bayer rights and to aid in perpetuating what was a monopoly for seventeen years, he should be careful to prescribe the drug under the term "acetylsalicylic acid". The Court now places the responsibility directly on the medical profession, and accordingly, physicians are urged to avoid "aspirin" and to write "acetylsalicylic acid".

THE Public Health Committee of the New York Academy of Medicine in its fight against a chiropractic bill in the New York legislature issued the following statement of facts concerning chiropractic. This article contains so much of real fact that we take the liberty of publishing it in full:

A STATEMENT ON CHIROPRACTIC
BY THE PUBLIC HEALTH COMMITTEE OF THE NEW
YORK ACADEMY OF MEDICINE

The interest of the medical profession in its opposition to the licensure of Chiropractors by the State of New York does not represent dissatisfaction with a school of the healing art conducted by competent educated persons skilled in the recognition and treatment of disease. It is not a subterfuge request to the State to guard the welfare of the recognized profession. It is a "safety first" warning by men qualified to judge the health interests of the State. The safety of the Commonwealth demands careful attention to at least one fundamental factor, namely: Are the exponents

of Chiropractic properly qualified to maintain the chief established principle of public health—the prompt recognition and isolation of communicable disease? An unbiased study of the requirements for graduation and practice of Chiropractic indicates that the Chiropractor is not by education or undergraduate experience in the least qualified to distinguish between communicable and non-communicable disease. Thus, license of the Chiropractor will immediately negate the elaborate, costly efficient efforts of the public health officials of the State in the prevention of epidemics by prompt report and segregation. This opinion is based on a large amount of collected evidence from which a few facts only are mentioned here to confirm the stated conclusion. In the Announcement of the Palmer School of Chiropractic, the foremost teaching institution of its kind, the following is said of contagious disease: "Medical pathology assumes that contagious disease always existed, or, at least they seem to suppose that each one caught it from someone else and if they could cure each person having such a disease, there would be none to catch. Chiropractic pathology finds that the same cause that produced the so-called contagious disease in the first person that ever had it, produces the same in the second. To correct the cause of the contagious or other forms of disease in one, means to be able to do so in others. Disease conditions are similar, differing only in degree and Chiropractors find the causes in the body and not externally." In other words, the Chiropractor treats contagious diseases in the same manner as he treats all other conditions.

Study of the following text-books of Chiropractic demonstrates an absolutely inefficient description of communicable diseases and the safeguarding of the public health:

Harry E. Vedder: A Text Book on Chiropractic Physiology, Davenport, Iowa, 1916.

Willard Carver: Psycho-bio-physiology,—consisting of applied psychology, biology as the cause of histology and anatomy, and a description of the conduct of anatomic parts which is physiology. Oklahoma City and New York, 1920.

Harry E. Vedder: A Text Book on Chiropractic Gynecology, Davenport, Iowa, 1919.

S. Burich: A Text Book on Chiropractic Chemistry, Davenport, Iowa, 1919.

Examination of the Announcement of the Palmer School of Chiropractic, Davenport, Iowa, demonstrates that no opportunity is given to the students for the recognition of communicable disease and no training in the safeguards to prevent the spread of such diseases.

While the evidence at hand is amply sufficient to prove the absolute inability of the Chiropractor to recognize communicable disease from the knowledge and experience he gains at his institution of learning, conservatism and stern justice demand a complete, searching investigation of chiropractic claims in the treatment of non-communicable disease before definite conclusions are justified. Such investigation is now being undertaken by one of the Foundations interested in professional education and the outcome is awaited with interest. On command of the Lieutenant-Governor of Ontario, Canada, the Honorable Mr. Justice Hodgins of the Supreme Court was given a commission to investigate medical education in Ontario, and his report in 1917 fills a book of 117 pages. Relative to Chiropractic he considered all phases of the problem, its origin, progress and practice. While careful study of the entire report is fully justified, the following brief abstracts are sufficient to indicate his conclusions:

"The repudiation by the Chiropractor of all modern scientific knowledge and methods is such that it would be impossible to recommend any way in which they could be allowed to practice by which the public could be safeguarded. Their case was well presented, but was definitely Ishmaelitish. Those who appeared before me saw no necessity for preparatory qualifications, ridiculed and repudiated diagnosis, bacteriology and chemistry; admitted that a chiropractor acts in all cases on his cardinal principle, without examination.

"Dr. B. J. Palmer, the head of the most important chiropractic college in the United States, in giving the evidence in the case of the State vs. Janesheski. in December, 1910, when asked whether, when a patient came to a chiropractor, he was asked the history of the case, answered: 'No, because it be of no value'; and in answer to why that was so, said: 'A person comes to us without telling us what the trouble is; it makes no difference whether a physician has already diagnosed it as insanity, appendicitis, indigestion, or anything they call it. The chiropractor needs to know nothing about that case from a physician's standpoint; it is immaterial, yet he can take that case, put it down on his benches and analyze that spine just as accurately without knowing those things; in fact, sometimes I think better. . . . It is not essential the chiropractor should know what that patient said he had, but you can adjust the current for it running into the organ, and the patient is well. That is where chiropractics becomes purely a mechanical proposition, a mechanical and electrical-making circuit proposition in a man.'

"I cannot bring myself to the point of accepting, as part of our legalized medical provisions for the sick, a system which denies the need of a diagnosis, refers 95 per cent of diseases to one and the same cause, and turns its back resolutely on all modern scientific methods as being founded on nothing and unworthy even to be discussed."

The Public Health Committee of the New York Academy of Medicine desires to emphasize the fact that the principles of Chiropractic and the understanding on the part of Chiropractitioners of the cause of communicable disease are so completely at variance with the principles of medical science as to constitute a menace to the public health. By legal recognition of the Chiropractors, the public might be led to believe that the practitioners are capable of offering competent treatment.

DEATHS

WILLIAM H. ROBERTS, M.D., Terre Haute, died May 8, aged 81 years.

SARAH BORAN, wife of Dr. E. V. Boran, of Oakville, died April 30, aged 36 years.

MARY COLE, widow of the late Dr. W. C. Cole, of Attica, died May 9 at Kirkwood, Missouri.

ALBERT PARKER, M.D., died May 6 at his home at Ora. He graduated in medicine from the Curtiss Physio-Medical Institution, Marion, in 1895.

WALTER E. HARDMAN, M.D., of Anderson, died April 23 at Gary, aged 47 years. Dr. Hardman graduated from the Medical College of Indiana in 1896.

LUCIEN C. ELY, M.D., New Palestine, died May 5, aged 66 years. Death was due to paralysis. Dr. Ely graduated from the Indiana Medical College in 1878.

JOHN W. McCausland, M.D., Fort Wayne, died May 31 at the St. Joseph Hospital, aged 65 years. Dr. McCausland graduated from Rush Medical College, Chicago, in 1879.

HARRISON PEACHEE, M.D., of Indianapolis, died May 11, aged 78 years. Dr. Peachee was a veteran of the Civil War and had practiced medicine in Indianapolis for many years.

WILLIAM J. HOADLEY, M.D., one of the oldest physicians in Hendricks county, died May 7 at his home in Danville, aged 90 years. Dr. Hoadley graduated in medicine from the Medical College of Ohio in 1866.

MOSES POLLOM, M.D., of Thorntown, died May 13, aged 42 years. Dr. Pollom graduated from the Medical College of Indiana in 1904. He was a member of the Indiana State Medical Association and the American Medical Association.

LEANDER DEWEES, M.D., of Hemlock, died May 14 of heart failure, aged 73 years. Dr. DeWees graduated in medicine from the Kentucky School of Medicine, Louisville, in 1894. He was a member of the Howard County Medical Society and the Indiana State Medical Association.

FRANK C. BOONE, M.D., Merom, died April 30, aged 61 years. Dr. Boone graduated in medicine from the Medical Department of the University of Louisville, Louisville, Kentucky, in 1893. He was a member of the Sullivan County Medical Society and the Indiana State Medical Association.

KENNETH M. FERGUSON, M.D., assistant physician at the Central Hospital for the Insane, died April 24. Dr. Ferguson had been a member of the staff of this hospital since June, 1920. He was born in 1863 and received his medical degree from the College of Physicians and Surgeons at Baltimore, Maryland, in 1882.

SAMUEL A. JOHNSTON, M.D., died May 20 from apoplexy at his home in Indianapolis, aged 45 years. Dr. Johnston was born in Indianapolis in 1876, studied medicine in Harvard University and graduated from the Indiana University Medical School. He was a member of the Indianapolis Medical Society, the Indiana State Medical Association and the American Medical Association.

LEANDER A. SPAULDING, M.D., of Bluffton, died May 12, aged 73 years. Dr. Spaulding was born in Blackford county in 1847. He began the study of medicine in 1873 and graduated from the Medical College of Ohio, Cincinnati, in 1877. He had practiced medicine at Bluffton for nearly 40 years. He was a member of the Wells County Medical Society and the Indiana State Medical Association.

WALTER D. HOSKINS, M.D., Indianapolis, died April 29 at the Methodist Hospital, Indianapolis, aged 50 years. Dr. Hoskins was born in West Newton in 1871 and was graduated from the Indiana Medical College in 1894. At the time of his death, he was a member of the faculty of the Indiana University School of Medicine, and an active member of the Indianapolis Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

TWENTY-FIVE nurses were graduated from the Indianapolis City Hospital Training School on June 8.

THE 63d annual meeting of the Indiana Dental Association was held the week of May 16 at Indianapolis.

DR. G. W. CAMPBELL, formerly of Winamac, has purchased the practice of Dr. W. P. Lane at Gary and has located in that city.

DR. R. E. DEWEES has been appointed City Health Officer for Hartford City to succeed Dr. Samuel Hardin, who resigned recently.

THE National Conference on Child Labor will be held in Milwaukee, Wisconsin, June 26-29, in connection with the conference on social work.

DR. A. C. CHENOWETH, who recently severed his connection with Dr. C. E. Caylor at Bluffton, has located at Wabash for the practice of medicine.

THE St. Joseph Hospital Training School for Nurses, Fort Wayne, held their graduating exercises on May 28, twelve nurses receiving their diplomas.

DR. CHARLES J. ROTHSCILD, of Fort Wayne, announces that on and after July 1st he will specialize in obstetrics and diseases and surgery of women.

DR. W. P. LANE has sold his practice at Gary and will locate in California. At present he is taking postgraduate work at the Mayo Clinic, Rochester, Minnesota.

THE initial meeting of the Italian Physicians' Association of America was held June 4 at New York City under the leadership of Dr. Michael Osnato, of New York.

DR. GEORGE H. McCASKEY, Indianapolis, announces that he is limiting his practice to ophthalmology, with offices located in the American Central Life Building.

COL. HENRY PAGE of the United States Army has been elected Dean of the Medical College of the University of Cincinnati to succeed the late Dr. Christian R. Holmes.

DR. B. P. WEAVER, of Fort Wayne, was the guest of the Delaware-Blackford Medical Society at Muncie at their May meeting, presenting the leading paper of the evening.

THE annual meeting of the seventh Councilor District Medical Society will be held July 6, afternoon and evening, at Franklin. A program of unusual interest has been prepared.

MRS. BETTIE FLEISCHMAN HOLMES, widow of Dr. Christian R. Holmes, has donated to the University of Cincinnati the equipment of the medical college cafeteria valued at \$5,000.

DR. SIMON FLENNER, Director of the Rockefeller Institute for Medical Research, has been elected an honorary fellow of the Royal Society of Tropical Medicine and Hygiene of London.

DR. J. A. CRAIG, wife and daughter, of Greenwood, left June 1 for an automobile tour through the East. During his absence he attended the annual session of the American Medical Association at Boston.

PHYSICIANS of Anderson recently have organized the Anderson Academy of Medicine. Dr. M. A. Austin is president, Dr. H. E. Gante secretary, and Drs. A. M. Collins, Weir Miley and Thomas Jones directors.

DR. and MRS. CHARLES BEALL and DR. and MRS. MILES PORTER, JR., of Fort Wayne, left June 2 for a motor trip through the East. While absent they attended the annual session of the American Medical Association at Boston.

DR. JOHN D. McKINNON has purchased the practice of Dr. Frank A. King at Garrett and located there for general medical and surgical work. He will have associated with him Dr. D. M. Reynolds, formerly a partner of Dr. King.

DRS. I. M. SANDERS, D. E. DOUGLASS and C. R. BIRD, of Greensburg, and DR. P. E. CLARK of Clarksburg left May 28 by auto for Boston and other eastern points where they expect to spend the next month or six weeks in postgraduate work.

THE Wells County Medical Society held a banquet at the Bliss Hotel on May 18. Speakers for the evening were Dr. Willis D. Gatch, of Indianapolis, who spoke on "Empyæma," and Dr. J. O. Ritchey, of Indianapolis, who spoke on "Nephritis".

DR. EUGENE LORING BULSON, who has been doing postgraduate work in New York City, will return to Fort Wayne about July 1 to be associated with his father, Dr. Albert E. Bulson, Jr., in the exclusive practice of ophthalmology and otolaryngology.

A FIFTH City Tuberculosis Clinic has been opened at 1933 Hillside Avenue, Indianapolis, under the supervision of the City Board of Health. Dr. C. J. McIntire is in charge and the clinic will care for patients mornings from 8 to 10 o'clock and Thursday afternoons from 3 to 5.

DR. ALBERT E. BULSON, JR., and daughter, Miss Geraldine, of Fort Wayne, attended the annual session of the American Medical Association at Boston. While in Boston, Dr. Bulson attended a meeting of the American Board for Ophthalmic Examinations, of which he is a member.

DR. FRANK A. KING, who has practiced medicine and surgery in Garrett for the past eighteen years, has disposed of his practice at that place and removed to Benton Harbor, Michigan, his former home. Before assuming practice at Benton Harbor he expects to spend six months in postgraduate work.

AT the annual meeting of the 9th Councilor District Medical Society, held at Lafayette, May 12, Dr. A. C. Arnett, of Lafayette, was elected president; Dr. G. D. Marshall, Kokomo, first

vice-president; Dr. Fred Tucker, Noblesville, second vice-president; and Dr. A. L. Loop, Crawfordsville, secretary-treasurer.

THE International Health Board of the Rockefeller Foundation has sent out a commission composed of Dr. William Walter Cort and E. L. Augustine, of Baltimore, and Dr. J. E. Ach-erst, of the Kansas State Agricultural School, to the Island of Trinidad to spend three months studying hook worm. They sailed on May 5.

DR. and MRS. BUDD VAN SWERINGEN, of Fort Wayne, with DR. and MRS. WILLIAM FULLER, of Chicago, left May 18 for a motor trip through the East. Dr. Van Sweringen will attend the Convention of Military Surgeons, the American Railway Surgeons' Convention and the annual session of the American Medical Association, while in the East.

THE Board of Directors of the Union Hospital, Terre Haute, has accepted the plans and specifications for a \$300,000 addition. Plans for the construction are being pushed as rapidly as possible. The new addition calls for a six story building with the first four floors containing 20 private rooms and four baths to the floor and a sun room covering the entire roof.

THE Marion County Tuberculosis Association has organized a campaign to do away with promiscuous spitting in Indiana and particularly Marion County. Many civic groups are cooperating in this campaign and have adopted resolutions advocating the enforcement of present health regulations against the spitting menace and urging enactment of further regulating measures.

DR. A. M. MENDENHALL, of Indianapolis, was the guest of the Montgomery County Medical Society at Crawfordsville on May 9 presenting a paper on "Pituitrin in Obstetrics". He presented the same paper before the Fayette County Medical Society at Connersville on May 21, and on May 27 addressed the Muncie Academy of Medicine on the subject of "Obstetrics in General Practice".

HONORARY fellowships to the following American surgeons have been awarded by the Council of the Royal College of Surgeons of Ireland: Drs. William J. Mayo and Charles H. Mayo, Rochester, Minn.; George Emerson Brewer, New York; George W. Crile, Cleveland; Richard H. Harte and William W. Keen, Philadelphia, and Albert J. Ochsner, Chicago. The ceremony of conferring the honors will take place in the autumn.

LEGAL obligations of a county or township to indigent tuberculosis patients are set out in an opinion that U. S. Lesh, Attorney-general, has prepared for Dr. Amos Carter, Superintendent of the Indiana State Tuberculosis Sanatorium at Rockville, Indiana, and is as follows: "I do not think that a board of county commissioners can legally refuse to aid paupers who are afflicted with tuberculosis. If it prevents their being cared for at the Poor Asylum, it should arrange for their maintenance elsewhere."

THE House of Delegates of the Ohio State Medical Association in session at Columbus, May 2-5, approved, by a vote of 58 to 10, senate bill 184, which repeals the law permitting nurses to administer anesthetics. The committee on the president's address reported favorably to the House of Delegates on his recommendation that the medical profession put aside its conservative policy and utilize the press to the fullest possible extent in teaching the people the things they ought to know about their life and health.

THE Research Information Service of the National Research Council announces that it is prepared to assist investigators by locating scientific publications which are not generally or readily accessible. It will also, as is desired, have manuscripts, printed matter or illustrations copied by photostat or typewriter. The cost of copying varies from 10 cents to 25 cents per page. Requests for assistance should be addressed to the National Research Council Information Service, 1701 Massachusetts Avenue, Washington, D. C.

THE Northern Hospital for the Insane at Logansport under the superintendency of Samuel Dodds has announced that a regular program of music and games under a competent leader has been made a part of the routine of the Institution. The theory is that such programs and games will be beneficial in awakening the indifferent from their lethargy and getting them away from their illusions and hallucinations. Such treatment it is believed will help the curable cases to recover faster and aid the incurable cases to adjust themselves better. In the industrial department of the Institution, the patients make brooms, brushes, rugs, weave sheeting and shirting, knit socks and stockings, make awnings and mattresses, mend shoes, and make harness.

MORE than 100 doctors, hospital superintendents and nurses from various parts of the state met at Lafayette, April 27, and organized the Indiana State Hospital Association. Dr. George F. Keiper of Lafayette was elected president; Miss Clara V. Pound, of the Reid Memorial

Hospital, Richmond, first vice-president; Dr. W. O. Gross, Fort Wayne, second vice-president; Miss Anna Mendenort of the Home Hospital, Lafayette, secretary; and Mrs. Ethel P. Clarke, of the Robert W. Long Hospital, Indianapolis, treasurer. Directors are Dr. C. S. Woods, Indianapolis; Dr. A. M. Hayden, Evansville; Dr. T. B. Templin, Gary; Dr. H. A. Duemling, Fort Wayne, and Dr. Charles M. Combs, Terre Haute. The object of the Association is to promote cooperation of hospitals throughout the State for the common welfare.

SECRETARY MELLON of the Department of the Treasury has ordered the centralization of all work, officers and personnel of the United States Public Health Service connected with the medical treatment of disabled war veterans, with the exception of hospitals and dispensaries, under the Bureau of War Risk Insurance. The reorganization will be put in effect at once. The change means that all field offices of the public health service engaged in the work of examining and finding suitable hospital beds for service men will be taken over by the Bureau of War Risk Insurance. All the contracts with private institutions for the treatment of such men will be taken over by the bureau also. The bureau proposes to establish an adequate force of medical inspectors to insure proper and effective treatment of patients of the bureau in whatever institutions they may be placed.

DURING May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

- The Gilliland Laboratories:
ACNE MIXED VACCINE—GILLILAND.
- Hoffman—LaRoche Chemical Works:
PITUGLANDOL.
- Lederle Antitoxin Laboratories:
CHOLERA VACCINE (PROPHYLACTIC)—LEDERLE.
PLAGUE VACCINE (PROPHYLACTIC)—LEDERLE.
- H. A. Metz Laboratories:
SILVER SALVARSAN
“ “ 0.05 Gm. Ampules.
“ “ 0.1 Gm. Ampules.
“ “ 0.15 Gm. Ampules.
“ “ 0.2 Gm. Ampules.
“ “ 0.25 Gm. Ampules.
“ “ 0.3 Gm. Ampules.
- Seydel Manufacturing Co.:
GUAIACOL BENZOATE—SEYDEL.

SOCIETY PROCEEDINGS

110 PERCENT CLUB				
No.	County	Secretary	1920	1921
1.	St. Joseph.....	R. B. Dugdale.....	75	87
2.	Franklin.....	M. G. Gaser.....	8	10
3.	Adams.....	L. E. Somers.....	11	14
4.	Carroll.....	Eva N. Kennedy.....	20	24
5.	Hendricks.....	W. T. Lawson.....	16	19
6.	Kosciusko.....	W. B. Siders.....	26	32
7.	Lawrence.....	F. S. Hunter.....	21	26
8.	White.....	H. B. Gable.....	10	11
9.	Jasper-Newton.....	O. E. Glick.....	24	27
10.	Orange.....	J. I. Maris.....	16	19
11.	Owen.....	Allen Pierson.....	9	11
12.	Wabash.....	Earl J. Cripe.....	26	30
13.	Pike.....	S. R. Clark.....	12	13
14.	DeKalb.....	M. E. Klingler.....	20	27
15.	Washington.....	Irvin Huckleberry.....	5	13
16.	Clark.....	Austin Funk.....	2	17
17.	Clay.....	H. L. Hirt.....	17	19
18.	Allen.....	Miles F. Porter, Jr.....	95	105

ELEVENTH DISTRICT

The twenty-fifth meeting and banquet of the Eleventh Indiana Councilor District Medical Association was held at Logansport, Thursday, May 19th, with seventy-six doctors from Grant, Huntington, Wabash, Miami, Cass and Carroll counties in attendance.

From ten o'clock until twelve Thursday morning clinics were held at the St. Joseph Hospital, under the direction of Dr. C. C. Hickman. Cases were presented by Drs. Rodney Troutman, C. H. McCully, J. H. Reed and James Gilbert.

In the afternoon the following scientific program was carried out: "New Ideas on the Treatment of Diphtheria," Dr. Lorin W. Smith, Wabash; "Cesarean Section Versus High Forceps Delivery," Dr. W. F. Smith, Huntington; "Epidemic Encephalitis," Dr. W. A. Fankboner, Marion; "Immunology," Dr. James L. Gilbert, Logansport.

The ladies were entertained with cards and games at the Trinity Parish House during the afternoon. At six o'clock a banquet was served at the Elks' Hall, followed by dancing and a musical entertainment.

Officers for the ensuing year were elected as follows: President, Dr. Ira E. Perry, North Manchester; and secretary-treasurer, Dr. J. H. Reed, of Logansport. Marion was selected as the next place of meeting to be held the third Thursday in October.

The meeting was the largest ever held in this District, and was most satisfactory from every point of view.

Dr. David N. Ross of Indianapolis was a guest of honor.

J. H. REED, Secretary-Treasurer.

TIPPECANOE COUNTY

After a six o'clock luncheon at the Hotel Lehr, April 15, 1921, an advanced regular monthly meeting was called to order by President McClelland. Minutes of previous regular meeting read and approved without change.

The regular order of business was waived and Dr. Reser introduced the speaker of the evening, Dr. Charles H. Viol, of the Standard Chemical Co., of Pittsburgh, Pa., who as a Lafayette boy, a graduate of Purdue University, has gone out into the world and made for himself a reputation which is not only national but international as a radium expert. Dr. Viol's subject was "Radium", which he handled from the standpoint of its discovery, its chemistry, the theory of its physical properties, the description of its production (which he illustrated by lantern slides) and some suggestions as to its therapeutic qualities.

Synopsis:—Shortly after the discovery of x-ray in 1895, Becquerell found two spots on a photographic plate that had been laid away in a dark drawer

along with some uranium. He immediately began searching for x-rays in this and similar minerals, and in this research work discovered that the salts of uranium had phosphorescent qualities and radio-graphic properties; and soon afterwards, in 1898, Madam Curie and her husband discovered radium.

Madam Curie, born of Polish descent, was a chemist who with her husband worked in a laboratory in Paris. The Curies, following the clue that Becquerell had tipped off and working with great originality and ingenuity through hundreds of processes of fractional crystallization, finally discovered the radio-active substance which Madam named radium. Later this woman through wonderful originality and inventive genius invented the electroscope which made it possible to measure the actual quantity of radium in a given sample. By means of this instrument the international radium standard was established in 1912 and today this standard is as immutable as the yard stick is for lineal measurements.

The atomic weight of radium is 225, this being exceeded by but two elements, thorium (231), and uranium (239).

All atoms are made up mainly of space in which are innumerable positive and negative electrons grouped around the element hydrogen (H).

The atom is compared to a planetary system with the central nucleus as the planetary body, and revolving around it in illimitable space are positive and negative electrons as satellites. Vibrations of these electrons in the case of the atom of radium, produce light—radium rays. In this atom the electrons are in an unbalanced state and in the rearrangement of electrons small charged particles are thrown off, traveling with great velocity—radio-active particles. Radio-activity is spontaneous emission of particles at high velocity. Thirty-four billion of these particles are transmitted every second and still it would take 1700 years for it to lose one-half its value, and another 1700 years to lose one-half its remaining value and in like proportion extending on into infinity. During this process there is formed radium emanations, which is probably a gas, called by some helium, which loses *half its value* in less than *four days* (3.85 days), and which is inert in one month. It is much more active than radium itself.

Radium rays are of three groups, *alpha*, *beta* and *gamma*, and their penetrations are, respectively, as 1, 100 and 10,000.

Alpha rays are positive, travel 12,000 miles per second, have slight power of penetration, are very caustic, are soon absorbed or easily screened as by a few layers of paper or by the glass of the containing tube; they have no therapeutic value as such but produce emanation.

Beta rays are negative, 100 times as penetrating as *alpha*, velocity about the same as light, 192,000 miles per second, composed of soft and hard rays, the latter penetrating deeply, and somewhat caustic, can be screened by a few mm. of heavy metal, as platinum.

Gamma rays are impulses made up of short waves of great velocity; composed of both soft and hard rays. The shorter the wave length the harder the ray and the more penetrating. Gamma rays are the most penetrating (10,000 times more than *alpha*), and the least caustic. Gamma rays are one-half absorbed in passing through one-half inch of lead and one-half of the remainder in passing through another half inch of lead and in like proportion *ad finitum*; while x-rays would be all absorbed by one-tenth inch of lead. It would take an x-ray spark gap of 8 to 16 feet to equal the hardest *gamma* ray.

Production.—Produced at the beginning mostly from pitchblend obtained in Bohemia, but this ore

is not very productive. Uranium ores are the most productive. Those of southwestern Colorado, called carnotite, are of high grade. A lower grade which is of a sandstone type is more easily worked. It takes 500 tons of this sandstone ore to produce one gram of radium. This 500 tons is reduced at the mines by grinding and washing to 125 tons, which is then sacked and transported by burros and trucks 65 miles to station, from where it is shipped by rail to Pittsburgh. The cost of rail transportation is less than from mine to station.

To work up this 125 tons of concentrate (originally 500 tons of stone) requires over 500 tons of chemicals, 800 to 1000 tons of coal and over 500 processes of fractional crystallization, consuming months of time, the final product being one gram of radium whose market value today is \$120,000.

The Colorado carnotite is the highest grade radium ore in the world but was never worked up in this country until 1913.

The total amount produced in the entire world since its (radium) discovery is 120 grams, about one-third of a pound.

There are about 50 grams in the United States, being more than one-third of all the radium in the world today. The Pittsburgh plant produced 18 grams last year, practically one-third as much as is in the United States today. France has one gram; Germany less than one gram; England two grams.

Therapy.—Radium can be used in most all forms of dermatological lesions, as eczema, nevi, port wine stains, pruritis, new growths both benign and malignant. It is used in treating malignancy in all forms and in all regions. It has an advantage over x-rays in that it can be applied in body cavities directly against or in growths without having to penetrate normal tissue. One of its greatest fields for successful results is uterine hemorrhage.

For therapeutic application it is provided in three forms: tubes, needles and plaques,—tubes for introducing in body cavities, hollow needles for introducing directly into tumors, and plaques when you wish to apply it over external areas as in cases of nevi, port wine stains, and other disfiguring lesions. The cosmetic results in these lesions are almost magical, but it requires the most expert knowledge and skill in order not to produce more damage by scarring than was present originally. Radium and x-ray treatments combined may be practiced in the future.

Radium bromide is a water soluble salt, therefore, it is transformed into radium sulphate, which is insoluble and therefore not liable to be lost by leakage when placed in moist tissues. Radium sulphate is a white powder that turns brownish with age but assumes its white color again on heating.

Discussion.—Dr. Wetherill asked: (1) Are the radium undulations actual? (2) Are the cancer cells destroyed or are they left in simply a resting stage? (3) Is radium a metal? Ans. 1st: Undulations are same as light waves through ether but of higher frequency and greater velocity. 2nd: The cancer cell nuclei which are in the field are destroyed, but probably some cells in the outlying parts are not touched. 3rd: Radium is a metal but it is used only in the form of a salt.

DR. BAYLE: What is emanation? Ans.: It is really a gas.

DR. WETHERILL: What is the smallest therapeutic dose? Ans.: 10 mg. used for cosmetic purposes.

Dr. Hunter announced that at the laboratory he had a sarcoma section from tissue treated with radium which showed beautifully the destruction of the nuclei.

A rising vote of thanks was given Dr. Viol for the evening's entertainment.

Dr. Keiper announced that the local committees for the promulgation of a State Hospital Association had perfected their arrangements, and the meeting would be held in Lafayette, April 27 and 28. It was moved, seconded and carried that this society entertain the visiting delegates and the local doctors and their wives at a 6 o'clock dinner at the Hotel Fowler. The chair appointed as a banquet committee for the occasion Drs. Pyke, Davisson and Van Reed; and as an automobile committee, Dr. Shafer. It was also moved, seconded and carried that the banquet be informal. Adjourned.

Members present, 38. Visitors present, 4.

W. M. RESER, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

SILVER ARSPHENAMINE.—**SODIUM SILVER ARSPHENAMINE.**—The sodium salt of silver-diamino-dihydroxy-arseno-benzene, containing approximately 20 percent of arsenic and approximately 15 percent of silver. The action and uses of silver arspenamine are essentially those of arspenamine (see New and Nonofficial Remedies, 1921, p. 41). Its claimed advantage over other arspenamine preparations is said to be due to the silver which improves the chemo-therapeutic index. In the presence of organic diseases of the heart, aneurysm, aortitis as well as other parenchymatous diseased conditions of the glandular structures, silver arspenamine should be used with great caution and in small doses. The dose of silver arspenamine is from 0.1 to 0.3 gm. for adults. To administer silver arspenamine the product is dissolved in sterile distilled water without application of heat and without shaking and then diluted with 0.4 percent sodium chlorid solution to make 20 Cc. per 0.1 gm. of silver arspenamine.—(*Jour. A. M. A.*, May 7, 1921, p. 1312).

SUPRARENALIN.—A brand of epinephrine, N. N. R. (see New and Nonofficial Remedies, 1921, p. 107). Marketed only in the form of Suprarenalin Solution.

SUPRARENALIN SOLUTION.—One thousand parts contain suprarenalin sulphite equivalent to one part of suprarenalin in physiological solution of sodium chlorid without addition of other preservatives. Armour & Co., Chicago.

STERILE AMPULES OF BENZYL BENZOATE.—H. W. & D. 0.5 Cc.—One Cc. contains 0.5 Cc. benzyl benzoate—H. W. & D. (see New and Nonofficial Remedies, 1921, p. 61) diluted with olive oil. Each ampule contains more than 1 Cc. Hynson, Westcott & Dunning, Baltimore, Maryland.

SILVER DIARSENOL.—A brand of silver arspenamine, N. N. R. (see *Jour. A. M. A.*, May 7, 1921, p. 1312). Silver Diarsenol is marketed in ampules containing, respectively, 0.05 Gm., 0.1 Gm., 0.15 Gm., 0.2 Gm., 0.25 Gm. of silver diarsenol. Diarsenol Co., Inc., Buffalo, N. Y. (*Jour. A. M. A.*, May 14, 1921, p. 1353).

MERCUROCHROME-220-SOLUBLE.—The disodium salt of dibromo oxymercury fluorescein, containing 23 to 24 percent of mercury. Mercurochrome-220-Soluble is a strong and rapidly acting germicide. It is active in urine 1 : 1,000 solution, killing *Bacillus Coli* and *Staphylococcus aureus* in this medium in one minute. It penetrates the tissues readily. The drug is tolerated in a strength of 1 percent by the bladder, renal pelvis and urethra. A 2.5 percent solution applied to the anterior urethra causes only temporary discomfort. The toxicity, when tested by intravenous

injection into rabbits, is rather high. Mercurochrome-220-Soluble has been used in cystitis, urethritis and in chancroidal ulcerations; also in affections of the eye and ear. Hynson, Westcott & Dunning, Baltimore, Maryland.—(*Jour. A. M. A.*, May 21, 1921, p. 1403).

PROPAGANDA FOR REFORM

ASPIRIN OR ACETYSALICYLIC ACID.—For many years the Council on Pharmacy and Chemistry, and the *Journal of the American Medical Association* have been urging physicians to avoid using proprietary names in prescribing drugs obtainable under a non-proprietary name. Two substances have been especially referred to in this connection, hexamethylenamine and acetylsalicylic acid. Many years ago, hexamethylenamine was found to be an effective therapeutic agent, especially as a urinary antiseptic. Since it was a well known chemical it could not be patented. A commercial firm, however, seized the opportunity and coined the name "urotropin" and advertised it. As a result the proprietary name became so fixed in the minds of physicians that some still use it in their prescriptions instead of hexamethylenamine. Acetylsalicylic acid was patented and the trade name "Aspirin" coined for it by the predecessors of the Bayer Company. During the patent monopoly both physicians and the public became familiar with the term Aspirin. When the patent expired, physicians continued to prescribe Aspirin, even though the drug was available under its proper name, acetylsalicylic acid. Having acquired the rights to Aspirin, the Sterling Products Company, under the name of "The Bayer Co.", has during recent years attempted to impress on the lay mind that there is no satisfactory Aspirin except Aspirin-Bayer. Recently a suit has been decided in which the Bayer Company sought to restrain the United Drug Company from selling acetylsalicylic acid under the name aspirin. The court holds that, since the public knows the drug as Aspirin only, the pharmacist may sell any brand of acetylsalicylic acid to the public when Aspirin is called for. On the other hand, manufacturers, pharmacists and physicians know the term acetylsalicylic acid and know that the term Aspirin was coined by the Bayer concern and hence, when a physician writes for Aspirin in his prescription only the Bayer product may be supplied. Physicians should avoid the term "Aspirin" and instead prescribe "acetylsalicylic acid".—(*Jour. A. M. A.*, May 14, 1921, p. 1356).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the claims advanced for them were held to be false: Murphey's Second Summer Remedy (Murphey Medicine Co., Inc.), an emulsion containing alcohol, sugar, castor oil, plant material and traces of peppermint oil and morphin.—(*Jour. A. M. A.*, May 21, 1921, p. 1417).

LUDLUM'S PASTE (Williams Manufacturing Company), consisting of copaiba, cubebs, and oil of sassafras in a fatty base. Prickly Ash, Poke Root and Stillingia Compound with Iodids (Allan-Pfeiffer Chemical Company), consisting of plant extractives, including a laxative drug, potassium iodid, alcohol, sugar and water. Gauvin's Cough Syrup (J. A. E. Gauvin), consisting essentially of extractives of wild cherry bark, spruce gum, sugar, alcohol and water. Meyer's Red Diamond Kidney Tablets and Compound Extract of Sarsaparilla with Iodid of Potassium (Meyer Drug Company), the first containing salts of benzoic and boric acids, atropin and vegetable extractives, the second consisting essentially of a syrup containing caramel, vegetable extractives, with small

amounts of potassium iodid, ferric chlorid and alcohol. Leonard Ear Oil (A. O. Leonard), consisting essentially of camphor, oil of eucalyptus, and traces of alkaloids in a base of liquid petrolatum.—(*Jour. A. M. A.*, May 21, 1921, p. 1417).

ERUPTION AFTER LUMINAL.—Luminal has been reported by two authors as producing an exanthem simulating urticaria: by two others an eruption simulating measles: by three, as simulating scarlet fever: and by two, as an unclassified drug eruption.—(*Jour. A. M. A.*, May 28, 1921, p. 1517).

TEKARKIN.—Many physicians have received a sixteen page pamphlet, "Therapeutic Leaves". "Therapeutic Leaves" purports to be a periodical, published as "a medium for the dissemination of knowledge pertaining to therapeutics". Actually it is an advertising medium dealing with the products of the National Bio-Chemical Laboratory—"Osmo-Calcic Solution", "Tekarkin" and "Osmotic Mangano-Potassic solution". These three preparations are said to be the formulas of Edward Percy Robinson, who lives in Mount Vernon, N. Y., and has an office in New York City. They are used by Dr. Robinson in the treatment of cancer. A package containing about 65 minims of Tekarkin and one ounce each of the other preparations sells for ten dollars. Most of the material in "Therapeutic Leaves" is a rehash of four papers published by Edward Percy Robinson in the *New York Medical Record*. In these Robinson advanced the theory that cancer is caused by an excess of sodium chlorid in the blood and tissues, and that it can be cured by administering a solution of potassium nitrate. However, "Homemade solutions," says Dr. Robinson, "are apt to be disappointing", and hence a solution of this chemical is sold as Tekarkin. This dilute potassium nitrate solution sells at the rate of sixty-seven dollars an ounce. At one time Dr. Robinson specialized in "facial contouring". Except for the articles that have been published in the *Medical Record*, literature does not indicate that Edward Percy Robinson can lay claim to special knowledge of or skill in the treatment of cancer.—(*Jour. A. M. A.*, May 28, 1921, p. 1514).

VACCINATION AGAINST INFLUENZA.—Prophylactic vaccination against influenza was practiced extensively during, but mostly following, the recent epidemic of the disease. In some districts stock cultures were employed; in others a culture of the strain or strains isolated during the epidemic, and in still others a mixed vaccine. McCoy presented his impression, as gained from the uncontrolled use of these vaccines, that while therapeutically they might be of value in the prevention of influenza, yet in every case in which they were tried under perfectly controlled conditions, they failed to influence either morbidity or mortality. In an elaborate study, Jordan and Sharp conducted observations on approximately six thousand persons. About one-half of these were vaccinated with a saline suspension of a standardized mixed vaccine; the remaining half were not vaccinated. The influenza attacks among the vaccinated numbered 4.1 percent; among the unvaccinated the morbidity from this disease was 4.8 percent.—(*Jour. A. M. A.*, May 28, 1921, p. 1503).

AQUAZONE (OXYGEN WATER) NOT ADMITTED TO NEW AND NONOFFICIAL REMEDIES.—Aquazone is stated by the Aquazone Laboratories, Inc., Los Angeles, California, to be a supersaturated solution of oxygen in water, carrying approximately five and one-half times as much dissolved oxygen as ordinary water. In an advertising booklet, it is suggested that Aquazone is of value in the treatment of influenza, pneumonia, typhoid, Bright's disease and kindred disorders. It

was also stated therein that in the treatment of fevers it lowers the temperature, and that the administration of three bottles of Aquazone (representing 0.033 gm.—1½ grains—of oxygen) is of value for "preventive and tonic purposes".

The evidence which the Aquazone Laboratories submitted did not show that the effects were other than those which might be obtained from the administration of ordinary potable water. The Council declared Aquazone inadmissible to New and Nonofficial Remedies, because the therapeutic claims made for it were unwarranted, and because its use is irrational for the reason that oxygen given by stomach in this way is of little or no value.—(Abstracted from Reports Council on Pharmacy and Chemistry, 1920, p. 50).

COAGULIN-CIBA OMITTED FROM NEW AND NONOFFICIAL REMEDIES.—Coagulin-Ciba was admitted to New and Nonofficial Remedies in 1915. It is stated to be an extract prepared from blood platelets and to contain thromboplastic substances mixed with lactose. Extensive clinical reports appeared to justify its acceptance for New and Nonofficial Remedies. However, in 1918, Dr. Arthur D. Hirschfelder reported to the Council that a number of specimens of Coagulin-Ciba failed to accelerate the coagulation time of blood. The results of Dr. Hirschfelder were subsequently confirmed by Dr. P. J. Hanzlik, who made an extensive investigation of the effects of Coagulin-Ciba at the invitation of the Council's Therapeutic Research Committee. Since the evidence indicates that Coagulin-Ciba has little efficacy, if any, as a hemostatic, the Council directed its omission from New and Nonofficial Remedies.—(Abstracted from Reports Council on Pharmacy and Chemistry, 1920, p. 53).

ELECTRARGOL OMITTED FROM NEW AND NONOFFICIAL REMEDIES.—Electrargol—a preparation of colloidal silver—was admitted to New and Nonofficial Remedies in 1914. In 1918, Fougere & Co. was advised of unwarranted claims which were being made for Electrargol and notified that the product would be omitted from New and Nonofficial Remedies unless a thorough revision of the claims was made in a reasonable time. As the reply of Fougere & Co. indicated that a genuine effort was being made to comply with the request of the Council, Electrargol was retained for the 1919 edition of the book. A reply was received from Comar & Co., in 1919. This reply was a refusal, with one exception, to modify the claims objected to. In view of this refusal to modify the claims, with one exception, the Council directed the omission of Electrargol from New and Nonofficial Remedies.—(Abstracted from Reports Council on Pharmacy and Chemistry, 1920, p. 58).

BOOK REVIEWS

NURSING IN EYE, EAR, NOSE AND THROAT DISEASES—

By A. Edward Davis, A.M., M.D., Professor of Diseases of the Eye in the New York Postgraduate Medical School and Hospital, and Beaman Douglass, M.D., Professor of Diseases of the Nose and Throat in the New York Postgraduate Medical School and Hospital. Second Revised Edition. 346 pages; with 32 illustrations. Price, Cloth, \$2.50. F. A. Davis Company, Philadelphia, 1920.

Every surgeon has his pet ideas concerning the manner in which his cases shall be attended and he generally insists upon assistants and nurses following his technic in the care of all of his patients. There are, however, certain well-defined principles which always should be the guide for students and nurses in the care of various diseases, and the duties during

and following operations. This volume on Eye, Ear, Nose and Throat Nursing, by two well known New York clinicians, is a safe guide for nurse, student or general practitioner, and offers practically all that should be known pertaining to the subject. While some of us may in a few instances follow a different technic than that advocated, yet no one is justified in criticising anything that is offered, and we therefore unhesitatingly recommend the book for the purposes for which it was written.

THE AMERICAN YEARBOOK OF ANESTHESIA AND ANALGESIA—1917 and 1918. By F. H. McMechan, A.M., M.D. 500 pages. Cloth, \$10. Surgery Publishing Company, New York City.

In reality this book is a collection of original contributions to medical journals by prominent men, covering the advances in anesthesia during 1917 and 1918. Fortunately the book contains practically all the worth while advances of anesthesia and analgesia in the surgery of war. In this connection it may be mentioned that during the war advantage was not taken of all of the best and most approved knowledge concerning anesthesia and analgesia, due perhaps to the short-sighted policy in not recognizing the fact that this branch of medical and surgical work is highly specialized and is deserving of being so recognized. Those experts in this special field whose talents were employed to the best advantage during the war were able, through the varied experience that the war afforded, to make still further advances, all of which are finding a place to-day in our civilian practice.

In the present yearbook an attempt has been made to collate papers dealing with the same subject or its pertinent phases. In so doing some duplication has occurred, but differences in technic and research have not been eliminated. The various chapters are as follows: Complicating Factors of Anesthesia; Safety Factors in Anesthesia; Anesthesia and Acidosis; Blood Changes Under Anesthesia; Circulatory Disturbances Under Anesthesia; Temperature and Anesthesia; Pharmacology-Physiology-Pathology of General Anesthetics; Special Methods of Anesthesia; Anesthesia at the Front; Anesthesia in War Surgery; Intratracheal Anesthesia; Pharmacology-Physiology-Pathology of Local Anesthetics; Local Anesthesia in General Surgery; Local Anesthesia in the Specialties; Local Anesthesia in Dentistry and Oral Surgery; Anesthesia in Obstetrics; Sacral Anesthesia; Spinal Anesthesia; Postoperative Care.

PRINCIPLES OF HYGIENE: A Practical Manual for Students, Physicians, and Health-Officers. By D. H. Bergey, M.D., Dr.P.H., Assistant Professor of Hygiene and Bacteriology, University of Pennsylvania. Seventh Edition, thoroughly revised. 556 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$5.50 net.

Several editions of this work are proof of its popularity. This last edition represents a rather thorough revision, largely required as a result of developments brought about by the great world war and the necessity for application of preventive measures on an extensive scale. The book has been prepared to meet the needs of students of medicine in the acquirement of a knowledge of those principles on which modern hygiene practices are based; to aid the students in architecture in comprehending the sanitary requirements in ventilation, heating, water supply and sewage disposal, and to aid physicians and health officers in familiarizing themselves with the advances made in hygienic practices in recent years. The author again calls attention to the lack of definite prophylactic agents for such diseases as

scarlet fever, measles, mumps and pneumonia, and especially for influenza and poliomyelitis, and he hopes that in the near future prophylactic agents that will bring these epidemic diseases under control may be discovered. The book contains chapters on Air, Ventilation, Heating, Water and Water Supply, the Removal and Disposal of Sewage, Garbage Disposal, Food and Dieting, Exercise, Clothing, Personal Hygiene, Industrial Hygiene, School Hygiene, Military Hygiene, Naval Hygiene, Soil, Habitations, Vital Causes of Diseases, Disinfection, Quarantine and Vital Statistics. The chapters on Military and Naval Hygiene have been entirely rewritten and contain more new information based upon experiences during our late war. Several other chapters, and especially the one on Industrial Hygiene, also have been amplified.

BACTERIOLOGY FOR NURSES: By Harry W. Carey, A.B., M.D. Assistant Bacteriologist, Bender Hygienic Laboratory, Albany, New York (1901-3). Pathologist to the Samaritan, Troy, and Cohoes Hospitals, and City Bacteriologist, Troy, New York. Second Revised Edition. 150 pages. Cloth, \$1.25 net. F. A. Davis Company, Philadelphia. English Depot, Stanley Phillips, London. 1920.

The author starts by saying that his book is an introduction to Bacteriology for Nurses. If this is an introduction, we are under the impression that the author thinks that the nurses ought to have a still more thorough knowledge of bacteriology than is contained in this excellent little work of his which gives more bacteriology than a good trained nurse need possess. We do not agree with him that many of the duties of the nurse require such an extended knowledge of bacteriology as is encompassed in the volume which he has prepared for the use of nurses. Undoubtedly the acquisition of much information of a technical character pertaining to the science and practice of medicine would prove valuable to a nurse, but already we have gone too far in ultra scientific training of nurses, and the crying need of the hour is, not so many over-trained nurses and nurses so thoroughly trained in technical knowledge as for many nurses with a good practical knowledge of the fundamental principles upon which nursing is founded. In other words, what we need is more nurses who can really care for the sick in a helpful manner rather than so many nurses, such as we too often see to-day, who are so highly trained that they feel that they can almost act in the capacity of the doctor, and are really of little service to the patient in caring for him in a sympathetic way and making him comfortable according to the most approved rules of nursing. However, aside from the condemnation of the object of the book, we have no criticism to offer, as the text does cover in a very satisfactory and entertaining way the principles of bacteriology. Two chapters which, no doubt, will be of special interest to nurses are those relating to the Destruction of Bacteria, Sterilization and Disinfection, and the Technique of Preparations for and the Collection of Material for Bacteriological Examination.

THE PRINCIPLES OF IMMUNOLOGY. By Howard T. Karsner, M.D., Professor of Pathology, Western Reserve University; and Enrique E. Ecker, Ph.D., Instructor in Immunology, Western Reserve University. Pages 309. Philadelphia: J. B. Lippincott Co.

This book has no competitor in the English language. It is a concise and authoritative presentation of our present knowledge of immunology. In the preface, the authors state that the work is "designed primarily for students of medicine and for those

practitioners whose duties have made it impossible to digest a large mass of publications on the subject, the scope of the book is restricted to fundamental principles". As this book deals with such topics as Toxins and Antitoxins, Application of Complement Fixation to the Diagnosis of Disease, Hypersusceptibility, Prophylactic Vaccination and Vaccine Therapy it is evident that it will be of interest to any practitioner of medicine who is interested in the clinical side of immunology.

HANDBOOK OF ELECTROTHERAPY. By Burton Baker Grove, M.D. Pages 420 with 103 engravings and 6 plates of 12 charts. Price \$4.00. Philadelphia: F. A. Davis and Co., 1921.

In this little book the author has attempted "to boil down the subject of electrotherapy and to treat it in a manner that it may be understood and made useful, not only to every electrotherapist but to the entire medical profession". The work is not a scientific treatise but men interested in the use of electricity as a therapeutic measure may find it of value. Many pages in the book have no place in a work of this character. For instance, forty-nine pages deal with the subject of blood pressure—the dietetic and drug treatment being included. The author's opinions on medical subjects, aside from electrotherapy, do not appear to be of great value. One has the feeling that the book was written to appeal more to the laity than to the medical profession.

DIAGNOSTIC AND THERAPEUTIC TECHNIC. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, M.D., late Lieutenant, M.C., U.S.A.; Attending Surgeon to the City Hospital, and to St. Bartholomew's Hospital, New York City; Consulting Surgeon to the Nassau Hospital, Mineola, L. I. Third Edition. Entirely Reset, Octavo of 864 pages, with 892 illustrations, mostly original. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$8.00 net.

This book, written by a general surgeon, is now in its third edition. The author "has endeavored to bring together and arrange in a manner easily accessible for reference, a large number of procedures employed in diagnosis and treatment". The general practitioner or specialist desiring an intimate knowledge of diagnostic and therapeutic measures will not consult these pages. Every medical man, however, will find here clear cut descriptions of practical procedures which he may at any time be called upon to perform. The first one hundred and twenty-five pages deal with the various methods of inducing anesthesia; the remainder of the book takes up, in an orderly manner, the diagnostic and therapeutic methods which may be applied to the different regions of the body. The book is thoroughly practical and as an office reference book it covers a field peculiarly its own.

TRAUMATIC SURGERY. By John J. Moorhead, M.D., F.A.C.S., late Lt. Col., Med. Corps, American Expeditionary Forces; Professor of Surgery and Director of Department of Traumatic Surgery N. Y. Postgraduate Medical School and Hospital. Second Edition. Entirely Reset. Octavo of 864 pages, with 619 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$9.00 net.

This second edition has preserved all the excellent features of the first edition. Medical men are all interested in learning to what extent they can apply to civil surgery the lessons learned in war hospitals. The preface of this book states that "the author is not of the opinion that the management of the injured has been radically changed by war experience".

We can all agree, in large measure, with this opinion. Some surgical practices, however, like the treatment of septic joints, have been very radically changed. The author has included in this edition many of the lessons which he learned in his military service—he gives a very good description of the Carrell-Dakin technic, his details of the Willems treatment are clear, and he shows many splendid illustrations of Blake and Bulkley's suspension methods of fracture treatment. Well over a quarter of the book is taken up with the subject of fractures, and no one could find fault with these pages. Probably the most disappointing chapter in the whole volume is that devoted to the subject of burns; he does not mention the newer paraffine methods of treatment and he ignores the value of the thorough preliminary cleansing of the severer burned areas. He advises the use of a three percent Picric Acid solution, but unfortunately the solubility of Picric Acid is only one part in seventy-eight of water. The methods of nerve anastomosis pictured on page 667 are both obsolete and useless. His description of traumatic neuroses is especially valuable. It is interesting to note that, in his opinion, "epilepsy is a very rare sequel of head injuries". In discussing spinal cord injuries he says, "Reflexes are wholly abolished in complete lesions at and below the level of the damage; but later the reflexes increase"—the reviewer cannot agree that the reflexes ever increase, or even return, after a complete transverse lesion of the cord. This book, however, contains so much information that is of extreme value in an emergency that every practitioner should have a copy of it in his library.

SURGERY: ITS PRINCIPLES AND PRACTICE. For Students and Practitioners. By Astley Paston Cooper Ashurst, A.B., M.D., F.A.C.S. Associate in Surgery in the University of Pennsylvania. Second edition. Cloth. Price, \$10.00. Pp. 1202, with 1143 illustrations. Philadelphia: Lea and Febiger, 1920.

This book can be highly recommended to anyone who desires a single volume text-book on surgery. Its illustrations are far better than those which adorn most of the pretentious works on surgery. The popularity of the book was proved by an early demand for this second edition. In a book of this size many important surgical conditions can be given but little more space than they receive in quiz-compends; therefore, it is a pity that Dr. Ashurst did not employ, for some useful purpose, the twenty-six pages wasted on Venereal Diseases as well as the forty-nine pages devoted to Gynecology. The author is a surgeon not a syphilographer, and for that reason he makes the statements that "the best way to administer mercury internally is in the form of the protiodide", and "the hypodermic injections of mercury salts have been found painful, dangerous and unreliable."

One is amazed to find a teacher of Surgery in the University of Pennsylvania advocating the discarded and utterly unscientific method of neuroplasty which is pictured on page 320. It is even more amazing to find him writing that "the nerves of special sense have no neurilemma" when, as a matter of fact, all the nerves attached to the brain, with the exception of the optic, are provided with a neurilemma. When discussing neuritis, alveolar abscesses and other foci of infection are not even mentioned. The treatment given for acute empyema thoracis is decidedly pre-war—no mention is made of the Carrell-Dakin or closed methods of treating this condition. The Willems method of active mobilization of infected joints, one of the greatest products of war surgery, is likewise ignored. The statement that "Carcinoma is the most frequent affection of the breast" is not true.

The author's recent military experience should have qualified him to speak with authority on subjects connected with war surgery. However, his teaching, that "the stage of true gas gangrene has seldom been seen except shortly before the patient's death," does not correspond with the facts. He is correct in advocating the guillotine method of amputation for gas gangrene, but he is incorrect, in the reviewer's opinion, when he says "if the amputation is done near the trunk no tourniquet should be used, but the main vessels should be ligated and divided as the first step."

Despite the many teachings with which we can find fault this book will be a staunch friend to both students and practitioners.

GYNECOLOGY. By Brooke M. Anspach, M.D., Associate in Gynecology, University of Pennsylvania. Cloth. Price \$9.00. Pp. 752, with 526 illustrations. Philadelphia: J. B. Lippincott Company, 1921.

This book contains an enormous amount of information in a comparatively few pages. It undoubtedly will find a place among the most widely studied text-books of gynecology. Like all gynecologists, the author is inclined to enlarge the field of his specialty, he says "Gynecology is today so broad a subject that in order to deal with it exhaustively a series of monographs would be required". The reviewer does not believe that the proper field of gynecology could be covered by a vulgar pad, still he does feel that the author might have devoted to purely gynecological subjects the space given to appendicitis, intestinal stasis, gastropnoxis, static backache, sacroiliac sprain, toxic arthritis and stone in the kidney. In an introduction, Dr. John G. Clark shows that he is greatly pleased with this book—the medical profession will be prone to accept Dr. Clark's judgment on a text-book of gynecology. The three chapters devoted to the Embryology, Anatomy and Physiology of the Generative organs form a very valuable feature of the book. The excellent chapters on Myomata of the Uterus and Malignant Tumors of the Uterus must be especially commended. One is rather surprised that no mention is made of the use of frozen sections in diagnosing cancer of the uterus. In the opinion of the reviewer, text-books should teach that the woman whose cancer is diagnosed from a frozen section, and whose operation immediately follows the diagnosis, has a better chance of cure than has the one whose operation is delayed until a specimen is hardened and fixed by the usual methods. The concluding chapter of the book deals with radium and roentgen-ray therapy: in the preparation of this chapter the author had the aid of Dr. Henry Pancoast—needless to say, the subject has received adequate consideration.

PRACTICAL PREVENTIVE MEDICINE. By Mark F. Boyd, M.D., C.P.H., Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Octavo volume of 352 pages with 135 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth. \$4.00 net.

According to the foreword, this book represents "an endeavor to briefly present the salient features of modern preventive medicine". The author has succeeded in accomplishing his purpose. The book is an admirable condensation of the more important works on preventive medicine and hygiene. The author certainly is correct in believing that this volume contains the minimum knowledge of the subject which a student of medicine or a practitioner of medicine should be expected to possess". The reviewer would suggest that the author could still

further condense his book without impairing its value by omitting some of the illustrations. For instance, Fig. 29 showing a man in a rowboat and Fig. 59 showing a pasteurizer made by an Ohio machine company are of questionable educational importance.

ABSTRACTS

PROBLEM OF NARCOTIC DRUG ADDICT

The report of the Committee on the Narcotic Drug Situation in the United States, adopted by the American Medical Association at the Annual Session in New Orleans, 1920, and published by the Council on Health and Public Instruction as one of its education pamphlets, has shown that existing conditions relating to narcotic addiction constitute a grave menace to society. Since reputable physicians generally are compelled to plead ignorance of the facts regarding the addiction evil, because these cases are rarely encountered in ordinary medical practice, Alfred C. Prentice, New York (*Journal A. M. A.*, June 4, 1921), calls attention to some of the more important features of that report for the sake of needed emphasis. He urges that the states should enact legislation supplemental to and in harmony with the federal laws, which shall enable the exercise of the special police powers of the states, in cooperation with the federal authorities, in giving full effect to the clear purpose and intent of the Harrison law. Such laws have been written on the statute books in Massachusetts, Rhode Island and Pennsylvania.

Public opinion regarding the vice of drug addiction has been deliberately and consistently corrupted through propaganda in both the medical and lay press. Fallacies may be found in *American Medicine*, *Illinois Medical Journal*, *American Journal of Clinical Medicine*, *Medical Record*, *American Journal of Public Health*, *Washington Post*, *Chicago Tribune*, *New York Tribune*, *New York Times*, *New York World*, *New York American*, *Harvey's Weekly*, *New Republic*, *Metropolis* and others. Any solution of this vexing problem must necessarily resolve itself into some plan for abolishing the total supply of drug that may be available to the addict from any and all sources. There are two main sources of supply, viz., the pedlers, most of whom are themselves addicts; and the trafficking doctor, the narcotic practitioner, the "script doctor" who prescribes or dispenses the drug to them for self-administration. The pedler, who deals largely in smuggled drugs, constitutes a comparatively simple police problem, easily solved by thoroughgoing enforcement of existing laws. The doctor is more difficult of apprehension, for he hides behind the cloth of a reputable profes-

(Continued on Advertising Page xviii)

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(Continued from Page 208)

sion, and pretends that he is treating a "disease" when he is really selling his professional privilege in a sordid market for a very large return in money. The remedy consists in abolishing the addicts' drug supply, first by prohibiting the prescribing or dispensing of these drugs to them by physicians, under severe penalty for such violation, and secondly through vigorous enforcement of both federal and state laws dealing with narcotic abuse. A physician who supplies narcotic drugs to an addict, knowing him to be an addict, or who connives with or condones such an act, is either grossly ignorant, or deliberately convicts himself as one of those who would exploit the miserable creatures of the addict world for sordid gain.

LESSONS IN MANAGEMENT OF DIPHTHERIA

The defects in the management of diphtheria among physicians, as shown by the study made by George H. Weaver, Chicago (*Journal A. M. A.*, June 11, 1921), may depend on several factors: failure to make cultures from sore throats; failure to administer antitoxin at once, and in every case which looks suspiciously like diphtheria, without waiting for the result of cultures, or in the presence of a single negative culture; failure to follow patients with sore throat after seeing them once; insufficient doses of antitoxin; failure to get the antitoxin quickly in contact with the circulating toxin; confusing diphtheria with other conditions. Of the reasons for the shortcomings of physicians in the management of diphtheria, Weaver says that lack of personal experience and infrequent contact with the disease are probably most important. He concludes that the important fundamental factor in further reducing the deaths from diphtheria must be education. The public must be taught to secure professional advice at the onset in every case of sickness attended with sore throat or with laryngeal symptoms. Some of the ways in which much can be accomplished are: personal instruction of mothers; carefully prepared articles, published in the newspapers in various languages, and disseminated as pamphlets; presentations on the moving picture screen, and instruction in school of the older children, who then become most efficient teachers of those at home. Like all educational efforts, in order to be efficient these must be continuous and carried out by persons with proper preliminary training. Much of this teaching must be done by physicians and nurses. Physicians cannot be too often urged to examine the throat in every case which shows abnormal conditions of the neck, and in every sick child to make cultures from all sore throats:

to administer diphtheria antitoxin in all suspicious cases without waiting for cultures, or in spite of a reported negative culture; to follow up all cases of sore throat until diphtheria has been certainly excluded; never to rest content when one dose of antitoxin has been given in a case of diphtheria, but to follow the case closely until the disease has been certainly controlled; to inject all therapeutic doses of antitoxin intramuscularly or occasionally, in very urgent cases intravenously; to suspect every case of croup as one of possible laryngeal diphtheria, and to treat as diphtheria all such cases as do not promptly clear up. To encourage such lines of action, culture outfits should be so distributed that they can be obtained when wanted with little trouble or loss of time. It is a question in Weaver's mind whether it would not be best to discontinue the issue of all curative packages of antitoxin of less than 5,000 units and to make 10,000 unit packages readily available. The administration of the toxin-antitoxin mixture to all young children is to be encouraged; and if widely enough used, it should materially reduce the incidence of diphtheria.

BRONCHIAL SPIROCHETOSIS

During the last year W. A. Bloedorn and J. E. Houghton, Annapolis, Md. (*Journal A. M. A.*, June 4, 1921), have had three cases of bronchial spirochetosis and a fourth case in which the patient harbored the spirochetes, which were found following the course of a lobar pneumonia caused by the pneumococcus, and which persisted after recovery from the pneumonia. All of these patients were born in the United States, and while some of them had been outside the continental limits, it is safe to assume that their infection was contracted in this country. The authors suggest that bronchial spirochetosis is probably more widespread than is generally recognized. The disease, in its clinical aspects, is very suggestive of pulmonary tuberculosis, but usually can be readily distinguished from this infection. The routine examination of all sputums should include a search for spirochetes, and their presence should be regarded as significant, unless proved otherwise. The disease appears to be susceptible of transmission from an infected to a noninfected individual, although the degree of contagiousness is probably slight. An individual harboring the spirochetes in the sputum may present little or no evidence of the disease himself, and it appears that there exist carriers of *Spirochaeta bronchialis*. The disease, as a rule, responds readily to treatment, and the arsenical preparations, particularly arsphenamin or neo-arsphenamin, are very efficacious.

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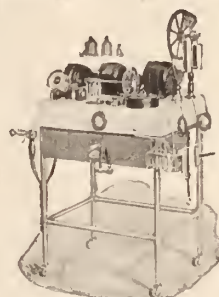
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Next Annual Session, Indianapolis, September 28, 29, 30, 1921. List of Officers and Committees on Adv. Page 2.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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By PROFESSOR J. DANYSZ, Chief of Service, Pasteur Institute, Paris. Translated by Francis M. Rackemann, M.D., Assistant in Medicine in the Harvard Medical School and in the Massachusetts General Hospital. 12 mo, 194 pages. Cloth, \$2.50 net.

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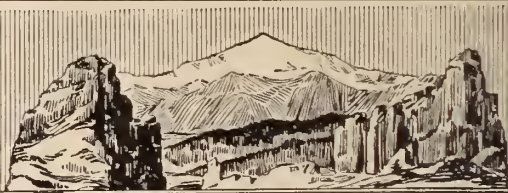
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JULY 15, 1921

NUMBER 7

ORIGINAL ARTICLES

SURGERY OF THE GALL-BLADDER*

LUTHER WILLIAMS, M.D.

INDIANAPOLIS, INDIANA

After a differential diagnosis of disease of the gall-bladder from the various upper abdominal diseases has been made, and medical treatment has failed, it becomes a surgical case. As to the exact time when the cases should pass from the medical to the surgical, this probably always will be a point of more or less contention, but the preponderance of evidence shows a much earlier time of change than formerly, as all surgical conditions are becoming much more readily recognized and treated accordingly.

Infections, malignancy, tumors and anomalous conditions produce practically all of the pathology of the gall-bladder and ducts, the most frequent being that of infection. The infection may be primary or secondary but it is primary by the time it demands surgical consideration, and will be the focus for so many systemic symptoms of which the patient complains and which go to make up the history of the individual case from which we get our first data of surgical significance.

With a thorough knowledge of the past clinical history the surgeon considers just what type of operation is best adapted to the individual case, and this will aid him materially in his first impressions as to choice; but it is not until the abdomen has been opened and a careful examination made that he can determine the operative procedure.

In cholecystitis we may or may not have stones. C. H. Mayo¹, the late Monahan², Judd³ and others claim that stones are present in fewer than fifty percent of all cases. It has been very much more noted recently by almost all operators that in cholecystitis, especially of long standing, the macroscopic evidences are clear of a pericholecystitis by adhesions to the surrounding structures. In the absence of gastric, duodenal or renal infections this alone is conclusive of the infection within and which has

been transmitted through the circulation of the capillaries and lymphatics surrounding the gall-bladder. Removal of these adhesions gives a clear field down to the gastro-hepatic ligament, and by further dissection and opening the border of the ligament a clearer vision of the gall-bladder and ducts will be obtained, and this also will aid in determining the amount, if any, of obstruction produced by the head of the pancreas. With this exposure and a packing off of the colon that may crowd into the field from below, or the stomach and duodenum from the left of the incision, the liver brought down and turned slightly upward and rotated outward from the median line, the ducts are put on tension and exposed throughout their course. Keeping in mind the salient points of the past history, the operator will determine whether he will do a cholecystostomy, a cholecystectomy, choledochotomy, or a cholecystoduodenostomy.

From the time of our own Doctor Bobbs down to recent years cholecystostomy was the operation of choice, but there has been a recession until at present many of those that were drained are now removed. The conditions causing us to make the choice of drainage are mainly those of pus in the gall-bladder. That is extremely dangerous to remove from adherence to liver and surrounding structures for fear of rupture, with an obstruction along the common duct such as stone at or near the ampula, malignancy, tumor of head of pancreas, or an active pancreatitis producing a lasting or permanent obstruction to the flow of infected bile into the duodenum, the infection even extending back into the hepatic ducts, with or without stones along the course. These cases present all the marked symptoms of a systemic infection, the indications for treatment being that of the most complete and quickest drainage possible. The drainage in these cases should be of large tube type. It should extend over a long period of time—from three to six weeks—by keeping the tube in position after the retaining sutures have been absorbed, allowing a long continued flow

(1) Mayo, C. H.: Mayo Clinic, 1917.
(2) Monahan: Monahan Abdominal Operations, Vol. II.
(3) Judd: Mayo Clinics, 1917-1918.

*Read before the Indiana State Medical Association at the South Bend Session, September, 1920.

of not only the pus but of infected bile, with a possible complete restoration of tissue, and at the same time assuring the patient and relatives that this is the best surgical procedure under the circumstances, and with the possibility of the necessity of future removal of the gall-bladder. This operation has proven the best as outlined in the main, especially so in the extreme cases and those of old age. Deavers⁴ reports that 4.07 percent of all his operations are secondary from drainage and mostly from stone reformation, showing the liability to reinfection with or without stone.

Again, reviewing the history of cases, we will find a vast majority of patients have complained of a long chain of symptoms, especially relative to the digestion, with or without pain and the resulting constitutional symptoms such as so-called rheumatism of muscles, joints, etc., which we have learned to recognize as localized manifestations of secondary infection with the primary focus in the gall-bladder. These may, but usually do not, have jaundice, usually slight with exacerbations. Macroscopically they will present in the operative field a gall-bladder that is not easily compressible with thickened walls, shrunk in size, or possibly larger than normal, with all the evidences of a long standing cholecystitis with its resultant peri-cholecystitis, extensive adhesions, strawberry and fish-scale variety, hydrops produced by obstruction of the cystic duct, glandular involvement extending down to the duodenum and head of pancreas. If pancreatitis it is usually of the chronic type with evidences of hardening and thickening. These cases may or may not have stones in gall-bladder or ducts. The best method of diagnosing these conditions after the exposure as outlined, is by passing the index finger of left hand down along ducts and through the foramen of Winslow with the thumb along and above the ducts, giving free access to the region of the head of pancreas and ampula.

For this class of cases having these symptoms in the main, with many variations that we learn by repeated examinations and past histories, the writer most assuredly would urge cholecystectomy. As to the guide for this choice, I wish to submit the classification of Monahan in his last work:

"1. Injuries as rupture, stab or bullet wounds, gangrene, phlegmonous or membranous cholecystitis.

"2. In chronic cholecystitis with thickening of the walls with or without stenosis of cystic duct, and when shrunk, shriveled up and adherent.

"3. In distention, hydrops or empyema due to obstruction of cystic duct from any cause, or

from mucous fistula from previous operation.

"4. In cases of fistula between the gall-bladder or cystic duct on the one hand and the stomach, duodenum or colon on the other.

"5. In multiple ulcerations of gall-bladder or cystic duct where stones have eroded their way through the walls into the liver, duodenum or protective adherent masses.

"6. In primary early carcinoma, strawberry or fish scale variety of gall-bladder."

Choledochostomy is indicated in the infections of the common or hepatic duct due to any form of obstruction that cannot be relieved by drainage of gall-bladder and where it is impossible to remove. Cholecystoduodenostomy will be of service where it is deemed not advisable to do either of the other operations, and will in some cases, such as malignancy or permanent obstruction to the flow along the natural channels, form a short circuiting of the bile into the duodenum, thereby giving temporary and occasionally prolonged relief.

The choice of operation should be decided upon the ultimate results we hope to obtain. In cholecystostomy we know that in a percentage of cases it is only the primary and will in all probability be followed by a secondary operation in the removal of the gall-bladder; but in a percentage of cases it will be preferable to take this course rather than to lose the patient by a removal at first. The next most important question is, What are the results after the complete removal? This can be answered first by the assurance that there will be no further possibility of the gall-bladder being a great focus of infection with its many resultant systemic manifestations; also that there will be a dilatation of the common and hepatic ducts and more or less of the remaining portion of the cystic duct as the operator may choose to leave. This dilatation is of a rather compensating nature and controlled largely by the pressure of the bile on one hand and the amount of obstruction by the muscle of Oddi at the ampula on the other. Judd⁵ and Rosenau have both shown that the resisting power of the muscle has varied from 350 mm. water to as high as 600 mm. water. It was the writer's privilege twelve years ago to review the personal notes of the late A. O. J. Kelley wherein he had demonstrated the resisting power at the ampula to be 22 foot pounds in disproving the theory of the backward flow of the infection of the bile tract from the duodenum. This resistance of the muscle of Oddi and the counter pressure of the bile by the more or less peristalsis of the duct assumes the role of the gall-bladder until the patient usually feels no inconvenience from his loss.

(4) Deavers, J. B.: *Surg., Gynec. & Obstet.*, 1917, XXV, 371-5.

(5) Mayo Clinics, 1918.

In order not to burden the Society with detailed statistics I wish briefly to give the history of just a few cases which, I am sure, are much the same as every operator encounters.

Case A. Mrs. S.; age 43; mother of five children. Complained of "stomach trouble" and had received medical treatment for same for seven or eight years previous. She gave a history of periodical attacks of severe chills with high fever following, each attack accompanied by severe pain which subsided in one to three weeks; otherwise healthy. On April 11, 1903, did a cholecystostomy, finding no stones; drained pus and thick, heavy mucus for five weeks with closure of fistula. Patient gained about thirty pounds and has been well since.

Case B. Miss E.; age 42. At time of first examination, March, 1912, gave history of having had attack of jaundice ten years previous which lasted for three or four weeks with slight pain followed throughout the intervening years with so-called "stomach trouble". On entering the hospital patient had no fever and complained only of the slight nausea; she had slight discoloration of the skin. March 21, 1912, I did a cholecystostomy, draining very dark bile which contained only colon bacillus, no stones. Drainage for four weeks; patient doing well; gained forty-four pounds during first year. About one and a half years later she had a recurrence of an infection, complaining of symptoms as before operation recurring at intervals of a few weeks.

The above are two similar cases, both of several years' duration before and after operation, one with a perfect result, the other with only temporary relief. The patient now shows no improvement, is very much discouraged, so much so that she refuses a second operation, and it is needless to say that such results cause more or less chagrin upon the part of the operator.

Case C. Mrs. H.; age 53; wife of physician. Admitted to hospital February 19, 1913. Temperature on admission, $104 \frac{4}{5}$ degrees; had been at times delirious for past two weeks. On February 22, three days after admission, I drained the gall-bladder of six ounces of very black bile which proved to be purely streptococcic. This patient had typhoid eight years previous, followed by violent attacks at intervals of a few months. A drainage of six weeks gave the desired relief up to the present time. This patient being in an extreme condition, after an explanation to the husband and family the most speedy operation was decided upon, with the understanding of a possible secondary.

Case D. Mrs. M.; age 73. Was seen with Dr. M. F. Hart of Kirklint, June 3, 1914. Had

been confined to chair and bed for more than eight months with pain in the region of gall-bladder; slightly jaundiced; had lost in weight from 120 to 82 lbs. After a careful history and examination I could only confirm the diagnosis made by Dr. Hart. June 21st gave one-sixth gr. morphine and 1-150 gr. scopolamine hypodermatically, with gas anesthesia by Dr. Cabalzer. We very gently and hurriedly removed four large stones, with large tube drainage; wound closed and patient put to bed with a pulse of 82; made a good recovery, this being done in patient's own home. July 1st of this year I had a report from her that she was able to be visiting relatives at that time and was enjoying unusually good health for one seventy-nine years of age. In this case a cholecystostomy with all the care and speed possible has proved a very satisfactory treatment.

From the reports (forty-nine) I have had from those patients who have had cholecystectomy, all have been very favorable with the exception of a very few (five) who are of sedentary habits, mainly office life, with habit constipation. Thinking the loss of gall-bladder possibly had produced it, it was relieved by treatment for the constipation.

My special plea is that the operative treatment be early; that the type of operation can best be determined by the surgeon after a thorough knowledge of the past history, taken in conjunction with the physical findings after the abdomen has been opened and a careful survey made of the pathology present; also that each type will be suitable to some case, but the vast majority of cases will do best with a complete removal of the gall-bladder.

DISCUSSION

DR. WILLIAM DAVIDSON (Evansville): From the amount of discussion that has been going on regarding cholecystostomy versus cholecystectomy it would seem there is still existing doubt as to the exact method of procedure in spite of the general weight having been thrown to cholecystectomy. I believe Doctor Williams in his summary has stated the case very well, that it is a consideration of the history and particularly the conditions after the abdomen has been opened. It is impossible to state beforehand what is best to be done, because many times, I am sure, every man who has been doing surgery of the gall-bladder is compelled to revise his decision in the fraction of a moment. Necessarily, it must depend on the findings when the abdomen is opened, on the physical condition of the patient and the presence of an active infection, and while no one desires to open the abdomen if there is evidence of recent infection, at times it does seem necessary. I

do believe that drainage, the usual cholecystostomy, has its place, but it is in the smallest percentage of cases that we are apt to use this. A number of years ago I tried, as nearly aseptically as possible, to aspirate after the drain had been in for two or three weeks, and was surprised to find the degree of infection still present. While the drainage had not relieved the condition, yet symptomatically these patients, after the fistula had closed, had been comfortable for months and even years, and all of us have known patients who have had a cholecystostomy years ago and have been comfortable ever since. The question arises if we are, from fear of complications, sometimes, and more on account of the patient, kept from doing a cholecystostomy more than we should. The thing we cannot get away from, however, is that a great many cases that are drained will go on for years without any trouble.

From the nature of the infection I do not believe, particularly in cases of cholangitis, that ordinary drainage of the gall-bladder is sufficient. If any drainage is to be instituted it would be better done through long drainage of the common duct, and the Sullivan T-tube recently put out has been of very valuable assistance. Drainage in case of prolonged icterus is much better done that way than by drainage of the gall-bladder, and these are the cases which we find from observation are apt to develop subsequent trouble after drainage of the gall-bladder alone.

I think Doctor Williams has well made the reservation that while cholecystectomy is the operation usually performed, yet there are cases which must be drained and through the gall-bladder alone.

DR. G. W. H. KEMPER (Muncie): I am not an operator, but I would like to call attention to some historical things. In the Transactions of 1879—that is only forty-one years ago—I contributed an article to the Indiana State Medical Society on "Affection of the Gall Bladder Tending to Result in Cutaneous Biliary Fistula". In that paper you will notice that I dug up the article of Doctor Bobbs, which had slept for twelve years. I had a case at that time where the woman developed a tumor in the right side. It went along and we thought it was an ovarian tumor until finally, as we said in those olden times, it "came to a head" and opened, and sixteen gall stones were expelled—and the woman got well. This is interesting as showing the natural history of one of these cases before the present day operations were conceived, because Marion Simms did not coin the word "cholecystotomy" until after my case occurred. In that paper I predicted that cholecystotomy would be used in the future, as it

has been. There are a number of cases mentioned in that paper. They were not treated surgically. If you have the paper in your library, read it! Improved methods of diagnosis and the surgeon's knife have done away with the cases I described.

DR. JAMES Y. WELBORN (Evansville): Doctor Williams reviewed conditions arising in the gall-bladder itself in contradistinction to the complications in the common duct that may require the removal of the gall-bladder even though the pathology in itself is not very great. I want to bring out this idea, that I have noticed the last few years that some gall-bladders apparently may be healthy though there is enough pathology to remind us that there is some trouble and confirm the clinical symptoms that the patient has had; and yet in searching the gall-bladder and going down to the cystic duct we find a hardened duct, reminding you of the grapevine condition that we find in the arteries. I believe this represents a class of cases distinct in itself. The clinical history in these cases is that of chronic symptoms, afebrile in nature. We will find there is a catarrhal condition in the cystic duct, and there is just enough force in the common duct to press the bile through, and it remains stagnant in the gall-bladder itself. Very few of these cases have stones; there has never been any real infection, but there is enough pathology there to produce a chronic condition. I think there is only one treatment for the condition and that is the removal of the gall-bladder, although it is not in a very bad pathological state. There may have been papers on that subject, but I have never seen much written about a contracted and hardened cystic duct. In bad cases of gall-bladder trouble you may find a normal cystic duct. The back pressure in the common duct is strong enough to force the bile into the gall-bladder, but there is not enough muscular strength in the gall-bladder to move this and therefore a slight catarrhal state ensues.

DR. A. M. HAYDEN (Evansville): This is a rather interesting subject to me simply because we are advocating leaving the gall-bladder in unless it is badly diseased. This opinion has been arrived at after doing gall-bladder surgery ever since it came into vogue years ago. Going back over the history of my cases I find about as much secondary trouble following the cases in which I have removed the gall-bladder as in those which I have drained. In fact, many cases I have operated on where the operation was imperative and had to be done rapidly, where we had a great deal of infection of the gall-bladder, with the idea of having to do a secondary operation to cure the case—we drained them for a week or two and the patient

got well and never had any more trouble, even though at the time I felt the gall-bladder would eventually have to be removed. In very few cases, I do not think more than one or two in all my years of surgery, have we had to do a secondary operation where I felt I was justified in leaving the gall-bladder at the time of the original operation. On the other hand, we have had several operations to do in cases where we had removed the gall-bladder, finding the common duct infected several years after the original operation. I do not believe we are justified in removing the gall-bladder unless it is in a pathological condition at the time of operation. I do not believe we are justified in removing the gall-bladder just simply because we have infection.

I call to mind a young lady who was in Washington (her father was a doctor) and was taken with a continued fever. When I saw her she still had fever and all the characteristic earmarks of infection somewhere, and I said it was infection of the gall-bladder; her father thought so too. This was eleven years ago. I said the thing to do was to drain the gall-bladder. We opened it up and drained it, she recovered from her fever and has never had any trouble since. I do not see where we would have gained anything by removing that gall-bladder. Take your cases of cholecystectomy, and if you had occasion to open them several years afterwards you will find that Nature has formed a rudimentary or new gall-bladder with the remaining portion of the cystic duct that will hold two or three ounces of gall. So when we have a gall-bladder that we do not have every reason to believe will give us trouble afterwards due to its present pathological condition, I believe we are better off to drain than to remove it. Of course if you have a gall-bladder that is absolutely in bad shape pathologically, the only thing to do is to remove it at once. But while you may remove the gall-bladder you will not be free from subsequent trouble, because we have had just as much subsequent trouble following cholecystectomy as following cholecystostomy.

DR. E. E. PADGETT (Indianapolis): I wrote a paper on taking out the gall-bladder several years ago, and got a terrific calling down from Doctor Ross. While I have taken out a good many, and still do, probably more than I drain, yet I certainly must agree with Doctor Hayden that taking out the gall-bladder does not always free the patient from symptoms, and it is a question in my mind whether or not it is a cure. I have had a number of people who demand that the gall-bladder be removed, but I tell these people that I will answer that question when I get in. I think that is the only thing to do.

DR. H. A. DUEMLING (Fort Wayne): I am glad the last two speakers have taken the stand they did because I think it will start a good fight. I want to take the other side and say that I am in accord with those surgeons who do an ectomy by preference. Instead of removing ten out of one hundred, I remove ninety and drain the other ten. And I want to say this, that when it comes down to a rapid operation an ectomy has it all over the drainage proposition. You can, and I think we will agree that you can, more easily remove a gall-bladder and get rid at the same time of all the pathology, than you can open such a gall-bladder and put in a drain. In desperate cases, where you cannot afford to give the patient a general anesthetic, you can do the work under local, remove the gall-bladder and give the patient the advantage of this rapid operation and also, and this is the important point, remove a big source of infection and remove all the pathology. I do not believe anyone would leave in an infected appendix, provided it could be reached without great disturbance.

I cannot understand why dilatation of the common duct should be regarded as a pathological condition after the removal of the gall-bladder. I have seen dilated common ducts many times in cases I had occasion to reopen that had cholecystectomy some time previously. Of course the duct is dilated, but it forms something which is akin to a normal gall-bladder and in which, moreover, those chemical changes that occur in the gall-bladder occur as well as before.

Another thing I would like to call to your attention is the fact that adhesions that form in some cases are more abundant and harder to combat and give rise to much more trouble later than those that follow a properly performed ectomy.

In regard to the technique of an ectomy, whether you take the gall-bladder out from the fundus or at the cystic duct, I think that must be decided by the individual operator and his ability in tackling that bladder from one end or the other. I used to believe, and do yet, that beginning at the fundus you have the advantage of bringing the gall-bladder out where you can plainly see the cystic duct where it enters the common duct. You will find sometimes that duct enters the common duct and sometimes it goes around here, and there is always danger if you begin by ligating the neck of the gall-bladder that you will injure the common duct, which I think is obviated if you begin at the fundus and dissect down.

No one would offer an ectomy as a cureall. I do not believe anyone wishes to say that anotomy or an ostomy is a cureall. I do not feel that an infected gall-bladder, with or without

stones (we are not operating for stones, we are operating for the pathology that is producing stones) should be operated without exploring the common duct. When men like the Mayos tell you that they cannot rule out stones in the common duct, and adhesions, then I believe we will be safe in assuming that we had better look into this common duct. Time and again cases come back for operation that have had the gall-bladder drained, and then we find quite large stones.

And now in order to give everybody a chance at me I would like to say that I do not believe that stones reform. I think the stones that reform have been overlooked by the surgeon in ninety-nine percent of cases, and I think the reason for that is that the surgeon is satisfied to open the gall-bladder, and feels so happy when he hauls out fifteen or twenty or perhaps one hundred stones that he forgets to look into the common duct. I do not mean that this is customary, but I do not believe that gall-stones reform.

DR. WILLIS D. GATCH (Indianapolis): I would like to express general agreement with Doctor Duemling's remarks. In regard to the ease with which a badly infected gall-bladder can be removed, I entirely agree with him that a gall-bladder of that type is much more easily taken out and the patient has a better chance after removal than after drainage. I recall a case I operated in which the gall-bladder was tremendously distended, hard; no jaundice; leucocytes 18,000; slight fever. We had to drain off the fluid before we could remove the gall-bladder. It contained mucus and a little pus; smears showed no bacteria. That is one point I want to make—that in many of these gall-bladders which look terrible you find really very little septic material when you make a bacteriologic study. In a gall-bladder of that kind the structures are edematous and have the consistency of cheese, there is partial necrosis of the gall-bladder and cystic duct, and if you try to fight hemorrhage from such tissues you may get into a bad mess. With a gall-bladder of this kind, with a wall perhaps quarter of an inch thick, you cut down to the submucosa and with your finger enucleate the whole thing. Such a gall-bladder may sometimes be taken out without using a single ligature. In other words, instead of cutting the main stem of the cystic artery you divide your hemorrhage among the terminal branches and it stops without much trouble. I think the patient is much better off with the gall-bladder out than in. If you leave it in it means prolonged drainage.

I also agree with Doctor Duemling in regard to the cause of the occasional dissatisfaction with the result of operation. I believe the most

important thing, more important than whether you remove the gall-bladder, is the scientific and complete exploration of the whole duct system in all cases who have been jaundiced. A good instrument for that purpose is an ordinary urethral bougie. Introduce that through the dilated common duct, shove it through into the duodenum and you can make sure by palpating along it whether or not there are stones. Some men insist upon prolonged drainage of the common duct, but I cannot see it. If you have the common duct open I do not see why the drainage of the bile into the intestine is not as good as draining it six or eight weeks out through the abdominal wall. In fact, I think it is better. I want to be sure that the common duct is open and then I want my fistula to close as quickly as possible.

As to the infection of the bile even in apparently perfectly healthy, normal individuals, the bile is often infected. Furthermore, not only is the bile infected, but the liver tissue is often infected. Bacteriologists have found that it is practically impossible, even at autopsy where there is an apparently healthy liver, to get out a piece which will not show bacteria. Why? Because the portal circulation is constantly filled with bacteria. They are doing no particular harm—the patient takes care of them. But if the resistance of the body gets poor, infection occurs.

DR. ALFRED S. JAEGER (Indianapolis): It seems to me that one of the reasons we have so much gall-bladder surgery to do is that we see these cases too late for any other form of treatment to do good. Just so long as the general practitioner will consider an "indigestion", or some other type of acute or chronic gastric derangement, to be due solely to changes in the stomach, just so long will we have gall-bladder cases in such shape that nothing but radical surgery will do any possible good. Just so long as the general practitioner makes a diagnosis of cholecystitis only on symptoms of jaundice, "coffee-ground" vomiting or bladder colic, just so long will we see these cases too late for non-surgical treatment. The fact of the matter is that some of the unsatisfactory results seen after operation is because too many men are doing gall-bladder surgery without proper training and do not know what they should do when they get to the case. If ever there was a field in surgery in which the surgeon needed to be a pathologist, it is in gall-bladder cases. Replying to Doctor Duemling, I wish to say that if I had gall-bladder disease I would be willing to have Doctor Duemling decide what was best to do, but he has had such exceptional opportunities, and has performed so many operations on the gall-bladder

that he knows his pathology, and what to do, and how to do it. But there are so many men operating on the gall-bladder who do not know what they find when they see it; who do not know how to decide whether to drain or remove, and when they do attempt to remove think they are doing a complete cholecystectomy when in fact they are only doing a resection, that as a result, the case frequently reverts to a pre-operative condition.

As to recurrence of gall stones, it may be that Doctor Duemling is correct, although it seems to me that the formation of a gall stone is somewhat analogous to the formation of a thrombus. A thrombus depends upon changes in the blood itself, the blood current or the wall of the blood vessels. So if we can be sure that gall stones are the result of some change taken place in the wall itself, then of course when the organ is removed or drained they are not likely to recur; but I am not sure that stones at times are not due to some condition of the bile itself, and if this is true, the same condition which caused them in the first place may cause them to recur, regardless of the surgery done.

I am very glad that Doctor Gatch mentioned the fact that practically all bile is infected. I am frank to say that I do not believe all gall-bladder inflammations are due to infection. The fact of the matter is the normal tissue has created an immunity and there is an underlying factor which excites the germ to activity, and when we have solved the problem of the true underlying cause we will be in better position to devise more successful treatment.

DR. J. C. FLEMING (Elkhart): This controversy of ectomy versus ostomy has been going on for a great many years and is not settled yet. There is no doubt that anyone who follows a considerable number of cases will find better results from ectomies than ostomies, and he will find there are other things to be taken into consideration. I think we should err on the side of conservatism, because if you remove a gall-bladder you cannot put it back, but if you do an ostomy you can take the gall-bladder out afterwards.

I want to mention two points that bear on this subject. A few years ago Doctor Case had a case at St. Luke's in which he demonstrated that the barium—an ectomy had been performed—actually permeated the capillaries of the common duct; in other words, that it went through the common duct into the small bile ducts. If that is true, why cannot food and everything else go through in some aggravated cases which follow ectomy?

Another thing, Ochsner makes the statement in the last Year Book that the patients who had an ectomy are coming back about three times as fast as those that have had ostomies,

and that when such a patient has a recurrence, unless there are stones in the common duct, there is not much you can do. I think this question is not settled yet. I think we should err on the side of conservatism, and when we can, do an ostomy and use a large tube and drain at least four or five weeks. I remember Stanton followed Ochsner's cases a few years ago and found that those ostomies in which the gall-bladder was sewed to the peritoneum, and the gall-bladder packed with gauze, had fewer recurrences than those drained with a tube. I do not know why, unless it was that they drained longer than those with the tube.

DR. W. H. WILLIAMS (Lebanon): There are advocates for both sides of this question, and both have good grounds for their belief. But I think looking over our work should largely be our guide in these cases. I mean to say that we should be conservative. We have a number of cases where the right thing to do is to drain, and we have a number where the only thing to do is to take the gall-bladder out. Just when you are to do one or the other will depend altogether upon the history of the case and the pathological condition that presents itself when you operate. I remember that Dr. John B. Murphy said one time that when you are doing a thing a certain way and are getting the results you want it does not pay to change. Of course I do not mean to say that we should never try to make "improvements", but I do mean that sometimes we allow the pendulum to swing too far to one side. If we have a large congested liver, with a gall-bladder whose wall is not thickened to amount to anything but which shows a sluggish condition, and filled with thick bile, probably this case will be better with prolonged drainage than to remove it. If you have a gall-bladder that shows the wall infected and thickened, probably surrounded by adhesions, it should come out whether it has stones or not. I think we all sometimes make the mistake of not draining enough. If we are going to drain a gall-bladder we should drain it well, put in a tube large enough so the infection can get out.

I agree with Doctor Fleming that as you look over the work that has been done you will find just about as much trouble with your ectomies as with your ostomies, and I do not feel that we will ever get to the place where we can say that all gall-bladders ought to be drained or all ought to be taken out, but I do think that the points just mentioned will be a fairly good working guide. Mistakes have been made in both types of operation and we must still expect disappointment in the results in some cases.

DR. LUTHER WILLIAMS (Closing): Since writing this paper seven or eight weeks ago I have received reports from about twenty-five

cases that I might have put in this record. These replies from patients have run about in proportion to those I have recited.

Doctor Jaeger spoke of not getting these cases early enough. I wish to insist that we should have these cases earlier than we usually get them. They are treated for so-called "stomach trouble" until it is almost too late to do them much good at times.

I did not speak of technique in the paper because each man has his own technique, but in the various pathological conditions that we find the macroscopic examination taken in connection with the patient's history it seems to me is one of the best guides we can have.

We cannot remove all gall-bladders, and we cannot drain all of them; but taking the statistics of such men as the Mayos on the one hand, and Ochsner on the other, it is rather difficult for one to decide. But I believe the history of the patient and the condition at the time of operation is the best guide.

TRAUMATIC RUPTURE OF THE INTESTINE*

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The first case which I wish to report is that of Mr. I., a farmer, age 65, who was injured by a horse crowding him against a timber of the barn. The accident occurred while he was standing with his abdomen against this timber and the horse when either frightened or while in a playful mood jumped against him. He did not at first consider himself severely injured. He was able to complete the work at hand and only sent for a doctor after pain and vomiting became established, which was several hours later. By the time the doctor arrived the pain was severe and vomiting almost continuous. I was with this man more or less until the time of his death some seven days after the accident. As long as consciousness remained he suffered intense pain; the abdomen was greatly distended; after the first day there was no bowel movement; and he died, evidently as a result of diffuse peritonitis which was caused, no doubt, from a ruptured intestine.

Case II, another farmer, about forty years of age, who was injured while buzzing wood with a buzz saw. While standing in front of the saw, a piece of wood was accidentally caught by the saw and hurled with much force against his abdomen. He was unable to continue his work and had to be assisted to his home, a distance of one mile. He vomited several times before we succeeded in getting him to bed, pain

was intense, and there was considerable shock. This man lived but five days, dying with all the symptoms of a diffuse peritonitis. Here again it is reasonable to suppose that his peritonitis resulted from a rupture of some portion of the intestinal tract. These two cases came under my observation when I was but fifteen years of age.

Case III was seen by me with one of my associates. A lad ten years of age was kicked in the abdomen by a horse. For the first few hours it was not considered that the child was seriously injured and my associate did not see him until ten hours after the accident. At that time there was pain, rigidity, tenderness, and vomiting. Operation was advised but refused, as it had been counseled against by another physician. However, at the request of the family, the child's abdomen was opened some thirty-six hours later. There was present a diffuse peritonitis and a rupture of the ileum about eighteen inches from the ileocecal valve. The rent was closed and drainage established, the child surviving but a few hours.

Case IV, that of a soldier who was kicked in the abdomen by a horse. The accident happened eighteen miles from camp. He was cared for the first twenty-four hours by his organization, at the end of which time his condition became alarming and he was sent to the base hospital, where he arrived in a state of collapse, thirty hours after the accident. No operation was undertaken and he died the following day. Postmortem disclosed a diffuse peritonitis and a rupture of the jejunum, also profuse hemorrhage resulting from torn mesentery vessels.

Case V, that of another soldier who was thrown from a caisson landing on his abdomen on a stump. Pain was intense from the first. This soldier was rushed to the base hospital at once, where his abdomen was opened within four hours after the injury. A tear almost severing the jejunum was discovered and closed by a side to side anastomosis. In this case there was complete blocking of the intestinal contents by sharp contractions extending for a considerable distance either side of the rent in the intestine. This soldier made a very good recovery and went overseas with his organization.

Case VI, a farmer, age 46, kicked in the abdomen by a horse. Pain was intense from the first. He was seen by my associate, Dr. Kimball, within six hours after the accident. Patient was brought to the hospital and the abdomen opened. A rent about fifteen inches from the ileocecal valve was discovered and closed. Search was made for other lesions but none were discovered. Again, one was impressed by the little soiling of the peritoneal cavity. In this case, as in Case V, there were

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marked contractions of the intestine either side of the opening in the bowel.

This same phenomenon has been observed by several operators. In 102 cases collected by Bevy and Genseppi, in but five cases was there free gas in the peritoneal cavity. These contractions are Nature's attempt to prevent leakage and can last but a few hours, as they will soon be overcome either by exhaustion or by a distension from accumulated gases. This patient was able to leave the hospital within two weeks after the accident.

Case VII—A boy, eleven years of age, after eating a very hearty dinner consisting of potatoes, meat, bread and butter, onions, apple sauce, sweet corn, and several other varieties of food, when climbing a tree for buckeyes fell a distance of twenty-five feet. After falling twelve feet he struck his abdomen on a limb, bounded from the limb and fell the rest of the way to the ground. He was taken to the hospital where it was discovered that his left arm was fractured. As the boy was suffering severe pain in the abdomen which was distended and very rigid, it was decided that it should receive surgical attention at once. The abdomen was opened an hour and a half after the injury. As the peritoneal cavity was entered fluid and gas escaped with much force. We appreciated at once that we had to deal with a rupture of the stomach. This rupture, when located, extended from the lesser to the greater curvature, a distance of over five inches, midway between the pylorus and cardiac end. The tear was rather clean cut, and it was repaired with but very little trimming. The abdomen was cleansed with warm, sterile salt solution, but it was impossible to remove all particles of food. The omentum, which had become edematous, held in its meshes many particles of sweet corn, crusts of bread, meat, onions, etc. There had not been a great amount of hemorrhage. The boy was returned to the bed in fairly good condition, the pulse being better than when he went on the table. However, he soon became very restless and died with all the symptoms of shock about twelve hours later. No postmortem.

Definite knowledge of the pathogenesis of traumatic rupture of the intestines dates back to 1877 when Von Linquet proved that the bowel was ruptured as a result of being crushed between the confining body and the bony parts and did not rupture as a result of increased intra-intestinal pressure, as was previously supposed. In 1887 Curtis not only collected 116 cases of traumatic rupture of the bowel but verified Von Linquet's conclusions. Of the 116 cases collected by Curtis, all had succumbed without operative interference. In 1888 Croft of England performed successfully an operation

for intestinal rupture, as did Moty, an United States Army officer, a year later. However, as early as 1883, Bowsley made an unsuccessful attempt at surgical interference. In 1902 Gage collected eighty-five cases in addition to Curtis' 116. Forty-five of these cases were not operated upon and all died. Of the forty cases operated upon, seventeen recovered. Included in these eighty-five cases were five cases of his own. The only case operated upon within the twelve hour period recovered.

Pepper in 1919 operated two cases; one, one and one-half hours after the accident. This patient died two days later. Postmortem disclosed a second laceration not discovered at the time of the operation. The second case operated upon within six hours, in which there were also two ruptures, recovered. The same year Mr. W. H. Battle of England operated four cases, all except one being operated upon within the twelve hour period, and all recovered. One case operated upon twenty-four hours after being injured was mistaken for a case of acute appendicitis. This case was injured by falling upon a golf ball. In 213 cases studied by this operator, rupture occurred in the duodenum, 32 times; in the jejunum, 111 times; in the ileum, 59 times; and in but 11 cases was there an injury to the large intestine. Of these 213 cases, 73 were run over in the street, 28 were kicked in the abdomen by a horse, 25 received a crushing injury, 35 were struck by a moving body, 12 were injured by a weight falling upon the body, and 27 were injured by falling; all other causes, 13. In this series the accidents occurred in but twenty-one females.

Of the symptoms as a result of rupture of the intestine, the most constant will be found to be that of rigidity of the abdominal muscles. The abdomen will be in a state of immobility. Dullness may be present in either or both flanks, but is rather an indication of hemorrhage than escaped intestinal material. A sudden rise of temperature occurring within the first few hours is very indicative of rupture and is the result of chemical changes rather than infection. The next most permanent symptom will be that of pain, providing the patient is not unconscious. The pain will vary in character from a dull ache to paroxysms which will be excruciating. However, if operation has not been decided upon, opiates in any form should be withheld until a definite line of procedure has been chosen. Often a hypodermic of morphine will give to the patient a sense of false security, many times causing a postponement until grave and fatal symptoms have developed. In the presence of shock, it may be advisable to administer morphine. Vomiting is a frequent and a relatively early symptom. However, it may be absent until peritonitis is well established.

In case of shock, where active hemorrhage can be eliminated, surgical interference should be postponed until reaction has been established. Many of these cases will demand transfusion; therefore, every hospital should have a waiting list, properly classified and typed, who are willing to act as donors. Many times a desperate case can, by proper treatment and nursing, be transformed into a fair operative risk. As a rule, a blood count is of no value and the same may be said of examination of the feces, and as peritonitis develops within the first six hours, immediate action is imperative.

In the face of peritonitis, the death rate changes immediately from 15 to 85 percent. Therefore, if we are to save these unfortunates, we must be able to make a diagnosis before its appearance. There is but one way that this can be accomplished, and that is by exploratory laparotomy. A thorough, rapid, careful exploration of the abdominal contents, if no pathology is present, will not result disastrously to the patient. On the other hand, if a ruptured viscus is neglected, death is the inevitable result.

In concluding, we beg to submit the following summaries: first, in the presence of shock, treat the condition; if hemorrhage is present, control it. Second, a slight blow either directly or indirectly, delivered to the abdomen at a time when the abdominal muscles are relaxed, may result in a crushing rupture of one segment of the bowel. The section most frequently injured will be found lying immediately anterior to the spinal column. Third, two or more lesions may result from the same injury, therefore careful investigation of all intra-abdominal organs is necessary. Fourth, if the peritoneal cavity has been soiled, a thorough flushing with warm, sterile salt solution, and the abdomen closed without draining, will give the best results. Fifth, when shock is not present or but slight, and when in doubt, operate.

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DISCUSSION

DR. H. A. DUEMLING (Fort Wayne): The outstanding feature that the doctor brought out was the fact that it is not necessary when the intestine is crushed or lacerated that it contain an abnormal amount of fluid. The fact is that a blow on the abdomen, rather light, may produce a rupture, irrespective of whether the intestine is full or not. He called attention to

the fact that contraction of the intestine is frequently seen on either side of the rupture. All of us who have done dog surgery and cut through the intestines with scissors have noticed how quickly the intestine contracts after injury, and it is the same with a human being.

I would like to call attention to another important feature, and that is the rigidity. This is not rigidity such as we see, for instance, in other peritoneal irritation; this is almost board-like. It is characteristic of ruptured abdominal viscus, whether intestine or gall-bladder. The fact is that the abdominal muscles take on a rigidity which is entirely foreign to other conditions. I am sorry to say that that is not always the case. I have had one case in my experience where I refused to make a diagnosis of rupture of the intestines because of the absence of that rigidity, which turned out to be a rupture.

Collapse and shock immediately following receipt of injury are also out of proportion when we compare the severity of the shock with that we see in other traumatic conditions. These patients are always in extreme shock, and if I disagree at all with what the essayist said I would like to say that a good big dose of morphine is the best way to combat shock, in my opinion. The pain is also of the excruciating type. Vomiting is a symptom which may or may not be present.

I would like to say also that it is not necessary that the abdominal muscles be relaxed at the time the blow is received. I recall a case where a man attempted to open a big monkey wrench. This wrench broke and suddenly hit his abdomen. I imagine that he was pulling hard and necessarily his abdominal muscles were in action. He fell to the ground and fainted, and was taken from the workshop to the office where he promptly revived and was then taken across the city. I saw him that evening and ladled out curdled buttermilk and a few other things from the abdominal cavity through the ruptured intestine.

I do not know, but I believe that the fact that the patient has a hernia plays a role in the production of rupture of the intestine when a blow is received on the abdomen. So many patients have hernia, and certainly a number of these will have rupture, though it may be a difficult matter to show any relation between the hernia and the rupture. I believe a man with a hernia certainly is more prone to rupture after receiving a blow on the intestine than a man without one.

I would also like to say that the intestinal contents which have escaped should be wiped out with a moist sponge. I do not believe in flushing, as that may carry the infection on:

but the contents of the intestine are not particularly infectious, and I am satisfied to sponge them out, close the wound, and drain the pelvis in the ordinary fashion.

An accident occurred in my practice which is unique. This patient had a gastric ulcer for which he was operated. He was not in good condition and we put in several silkworm gut sutures in order to get in and out and get him off the table. This wound did not close properly but allowed the intestine to work its way over the silkworm gut stitch and that stitch actually cut the intestine in two and the patient died. I mention that because it is an extraordinary occurrence.

I think the symptoms mentioned by Doctor Martin are sufficient in all cases to establish a diagnosis of rupture of the intestine, and I am heartily in accord when he says that it is a little better to open the abdomen when you are in doubt than to wait until everybody can see that your patient is slipping away and you have not been true to your duty.

DR. J. B. BERTELING (South Bend): I would like to lay particular emphasis on the fact that when you have a ruptured intestine you have absolute rigidity. Whether that rupture of the intestine be from direct blow, whether it be due to a duodenal ulcer, or whether it be even a gun-shot wound, it has been my experience that you have this rigidity. I have only had three or four cases, one a man who about five in the afternoon went into a neighboring saloon (this was seven or eight years ago) and with a traveling man had a cheese sandwich and some ginger ale. He had had some digestive trouble and within three-quarters of an hour he had violent pain requiring three-quarters grain of morphine to relieve, and at ten that night I saw him. He was perfectly comfortable, perfectly satisfied with himself and his surroundings, but he had an absolutely rigid abdomen, so rigid that I think you could have driven a truck over him and it would not have indented it. In taking the history of the case, together with the condition of the man—he had a slight temperature but no pain—I informed him he would have to be operated that night or I would refuse to call on him the next day. He consulted with his wife and decided he would be operated on. We took him to the hospital and at two that morning we operated. I made an incision below the umbilicus, and as I got down to the peritoneal cavity a lot of peculiar colored fluid came up, small yellowish particles which at the time I was in doubt as to what they might be. I could not imagine they were purulent, and as I went down a little farther I saw a streak of bile. I then closed the wound and went into the epigastric region, and in a very

short time when I pressed in the region of the gall bladder some bile came out and some of these yellow particles. I had no difficulty in locating a ruptured duodenal ulcer, resected it and closed the wound, and the man made an uneventful recovery. But I want to lay stress upon the absolute rigidity of these muscles. I believe if I were called to a patient that presented symptoms of that kind, with pain, with or without vomiting, I would immediately go into the abdomen, and I think I would be justified in doing so. In examining some of these yellow particles that came out from the rupture into the pelvic cavity I found them to be cheese, and I suppose some of the fluid probably was ginger ale. It has been said that the reason the peritoneum is so resistant is because the fluid from the stomach is sterilized, but within six hours I can scarcely believe it would be sterilized; but the peritoneum is very resistant.

Another young man I operated on four or five months ago who had had duodenal ulcer since he was fourteen, and in his case there was no difficulty in locating the ruptured intestine, except that there was an enormous quantity of fluid and undigested food in the peritoneal cavity. However, it does not seem to make very much difference how much undigested food or how much material from the stomach has entered the peritoneal cavity, you can clean it out if you do it early enough and the patient will recover. After his case I was called to another man in the neighborhood who had been struck by a crowbar. He refused operation and I predicted he would die within two days. He was operated by another physician and I was present, but he had a gangrenous bowel and died within the time I indicated.

I simply want to lay stress on the fact that whenever you have an injury over the abdomen, whether it be a blow or from some other cause, a duodenal ulcer perhaps, if you have sudden pain and collapse and absolute rigidity of the abdomen, go into that abdomen. If you do not you will be guilty of neglect.

DR. DAVID ROSS (Indianapolis): Such a thing as falling back on exploratory laparotomy for diagnosis in ordinary circumstances would certainly be regrettable, but in perforation of the intestine, from whatever cause, you are facing a condition of such imminent danger and the time is so short in which you must do something if you are going to do it at all, that it is not only allowable but imperative, and failure to do so, allowing your patient to die, is criminal neglect.

DR. J. C. FLEMING (Elkhart): I would like to report one case that proves that we can have a peritonitis even without rupture of the intestine. About a year ago a blacksmith who had

a hernia and wore a truss was shoeing a mule. At the point where this hernia was, the mule simply pushed him—it was too near to kick—and a fold of the abdomen was caught between the hernia and the truss. The man suffered a great deal of pain, went home and remained the rest of that day, but the next day went to work. He worked part of that day and went back to bed and called a physician. I saw him five or six days after that when his pulse was almost imperceptible and he had a distended and rigid abdomen and all the signs of peritonitis, too late for any hope by operative interference. I advised them to let him die in peace, which he did that night, and the following morning we did a postmortem and found a generalized peritonitis, and a most careful search of the entire intestinal tract failed to reveal any evidence of rupture or any perforation whatever; still he had a general peritonitis. Just how that happened I do not know, but the intestine may have been pinched between the hernia and the truss in such a way that micro-organisms could travel through the bowel wall, for there was no perforation.

DR. GEORGE D. MARSHALL (Kokomo): I had a ball player at Kokomo about eight years ago who was struck in the right abdomen by the knee of a runner. This man developed all the symptoms of peritonitis and died within forty-eight hours, although at postmortem there was no rupture of organs to be found anywhere. Apparently it was a traumatic peritonitis.

DR. WILLIS D. GATCH (Indianapolis): To my mind there is a relation between hernia and rupture of the intestine. I saw a case in which such relationship was shown at operation. The patient had a small left inguinal hernia. One morning when going to work he ran to catch a street-car and jumping to catch the car strained himself in some way and felt a sudden agonizing pain. It happened within a block of the hospital and he was taken there at once. He had this hardness of the abdomen that has been described and that was about all, except vomiting. He was operated at once and a loop of the small bowel found which had been torn clear across. I think this case is absolute proof that without a blow it is possible for a man who has hernia to sustain a complete rupture of the intestine.

The question which often arises in this connection in industrial work is whether there is such a thing as traumatic appendicitis. I am often appealed to in regard to that question. Personally, I have never seen a case in which I was convinced that the appendicitis resulted from trauma, but theoretically I think it is possible. Suppose you had a chronic appendicitis with the appendix coiled around the head of

the cecum, and then suppose the patient sustains a sudden blow in the abdomen so that a volume of gas is thrown into the cecum, I could conceive that the cecum would expand in such a way as to tear the appendix and produce true traumatic appendicitis.

DR. H. H. MARTIN (closing): There is one point that I wish to emphasize and that is, the importance of not giving morphine when dealing with an acute abdomen until a definite line of action has been agreed upon by the patient or the patient's family. Not infrequently a single hypodermic will lull the patient and family into a sense of security until golden opportunity of early relief has passed and disaster follows.

Rupture of the intestine frequently results in the presence of hernia when a loop of intestine is occupying the sac at the time of trauma directed against a hernial protrusion. The majority of these cases give a history of hernia as well as that of wearing a truss.

Again I wish to emphasize that it is possible to save eighty-five percent of these cases, but if so it necessitates early action.

THE SYSTEMIC REACTION OF THE ROENTGEN RAY

A CURE FOR ARTERIO-SCLEROSIS?*

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Following the administration of a massive dose of Roentgen rays to any considerable body area, there occurs (among other things) a lowered systolic pressure of varying degree and promptitude, depending on the dose administered and the skin or body area which receives this dose, and it is also varied by the region exposed to the rays. This lowered systolic pressure lasts for a variable period, which likewise is in proportion to the dosage. The reaction period lowered pressure lasts from 3 to 5 days with a patient of previously normal pressure, after which period it returns to normal and remains there; while with the arterio-sclerotic patient there is a drop of varying degree from the usual, and there is never any return to the former high mark. My studies of this effect have been incidental to the treatment of deep seated cancer with the massive filtered doses of Roentgen rays. My earliest observations were that following such treatment there was a period of mental depression, malaise, anorexia, ataxia and constipation.

A succeeding observation was that each of these patients experienced a fall of systolic pressure more or less decided, and I have naturally made an ensemble of these observations

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which gave rise to the speculation as to whether the general malaise noted was produced by the fall in blood pressure, or the malaise and fall in blood pressure were occasioned by one and the same agent, namely, the chemical effect of the Roentgen rays.

After determining these facts I have systematically hospitalized all patients during each series of treatments with heavy x-ray dosage, keeping them recumbent in bed until the acute systemic reaction period has passed and the blood pressure again is mounting. These observations extended through two years ending in July, 1917, when they were interrupted by my joining the Army Medical Corps for the war. I recommenced in September, 1919, on my return to practice, and now have the advantage of observations of two patients who had this reaction in the months of September and November, 1916, and whose present condition of lowered pressure and improved nutrition and strength gives me cause to believe that in this systemic reaction we have an agent of remarkable value as a treatment for arterio-sclerosis.

PATHOLOGY AND MANIFESTATIONS OF ARTERIO-SCLEROSIS

It seems advisable to digress at this juncture from the primary subject matter to a brief consideration of the pathological manifestations of arterio-sclerosis. The disease is made manifest by impaired nutrition and elimination, a dry, hard and non-elastic skin, and certain mental symptoms, all of which are in proportion to the state of the disease. There is more or less dyspnoea on exercise and this is also produced by lowering of the barometer, the more so when there is involvement of the coronary artery and aorta. The direct tissue changes are marked thickening of arterial walls, and later a calcareous degeneration with corresponding loss of elasticity. The advanced state of the disease is readily demonstrable by roentgenography. Adami objects to the name of this disease, urging that it is neither adequate nor comprehensive.

The cause of arterio-sclerosis remains the subject of dispute, theory and conjecture. Many of the theories of disease causation are the result of half baked or quite raw conclusions on the part of someone who arrives at them by first taking an arbitrary or academic stand and then trying to substantiate, a process in which there is no more sense than for a detective to seize someone on suspicion or assumption that he is the criminal and then proceed to follow his clues and collect the evidence necessary to convict and thereby justify the blunder. Syphilis and alcohol have thus been indicted for the crime of arterio-sclerosis. This seems consistent, for they have been charged with causation of practically every other more or less

obscure disease, so why not with arterio-sclerosis.

In my personal observations, which, needless to say, cover many cases other than the few I shall report herein, I have found no evidence that either syphilis or alcohol are productive of this malady, and Cabot, after extensive clinical data, acquits alcoholism as a causative factor. Adami believed that overeating is productive of the disease. I make bold to suggest that auto-intoxication resulting from over-eating and constipation is the cause of the majority of cases.

KNOWN PHYSIOLOGICAL EFFECTS OF THE ROENTGEN RAY

Since the x-ray reduces intra-arterial pressure, questions at once arise as to the physiology involved. The researches of Sir Oliver Lodge and Cleaves are to be credited with the discovery that the x-rays have a direct physiological effect on the human organism, but whether or not they give a solution to the problem now to be considered I leave to the judgment of the reader. The writers named have shown first and others later, that all of the short wave length rays have a marked power of oxidation and ionization, and that this power is increased progressively toward that extremity of the spectrum: that the blue and violet rays are but feeble in this respect but the power progressively increases through the bi-violet and x-ray or tri-violet steps of the spectrum. Lodge says the x-rays act most vigorously on active cells in which changes are occurring, therefore the effect is greater on the dermis than the epidermis. Both Lodge and Cleaves believed prolonged exposure to x-rays to be disastrous to hemoglobin. Maute's researches showed that a single exposure to x-rays produced a marked leucocytosis with an increase in both colored and white corpuscles.

Clinically I observe a paresthesia of the treatment area, lasting a variable period, but usually greater than that of the skin reaction. This is more than superficial, for I have seen a cancer patient who also had tic douloureux go entirely free of his tic during a reaction period lasting several weeks. There is in some cases a pre-reaction erythema appearing during the treatment and lasting from a few hours to two days. I have frequently heard of nausea as a part of the systemic reaction observed by other roentgenologists, but in my own experience this symptom does not occur. It is attributed by some roentgenologists to the production of large quantities of nitrous oxide by ionization. I obviate any possibility of this occurrence by forced and full ventilation, keeping the patient warmly wrapped.

The *modus operandi* whereby the blood pressure is reduced is speculative, and may remain so. If it is difficult to know how the intra-arterial pressure is reduced temporarily for the patient of previously normal pressure, it must be still more difficult to determine a satisfactory explanation why with the arterio-sclerotic patient, the pressure is permanently lowered, all symptoms permanently alleviated and, in short, a symptomatic cure produced. Nevertheless, my observations indicate that such is true.

REPORT OF CASES

Case 1. Man, aged 74. First an army officer, then a merchant, and for 10 years last past, secretary of a manufacturing company. Came under x-ray treatment for deep seated sarcoma of left hip. A consulting surgeon believed him inoperable by reason of advanced age, the state of his circulation, and general poor health. I had previously treated him for arterio-sclerosis, having used ineffectually the auto-condensation method which would induce a reduction of his pressure, slight perspiration, amelioration of dyspnoea and other symptoms, but the benefit was only temporary and at the end of 3 or 4 days, even if the atmospheric conditions were favorable, his pressure would again be at its maximum. Treated Aug. 20, Sept. 20, and Dec. 31, 1916. All three treatments were of the massive, filtered x-ray dose.

On the first date he was treated for 10 minutes at 14 inches focal distance with 18 milliamperes of current through a filter of 6 millimeters of aluminum, and 8 layers of chamois skin. Up to the time of this treatment the patient had a systolic pressure of about 200, poor appetite, violent headaches and constipation, a dry, hard, non-elastic skin and could not tolerate cold, nor even the coolness of summer nights. I continued observation of his arterial condition, expecting to again resort to the auto-condensation method but found his pressure reduced on the day following the x-ray dose to 170. At date of second treatment his pressure had reacted to 180. Second treatment Sept. 20. Technique: 20 milliamperes, 18 inch distance, 9 inch spark gap, filter, 6 millimeters aluminum, 1 layer sole leather, 4 layers chamois skin, time 30 minutes. On the day following the systolic pressure was reduced to 160. It had reacted to 175 on the date of the 3rd treatment, Dec. 31. Technique of 3rd treatment, 20 milliamperes, 18 inch focal distance, 9 inch spark gap, filter, 6 millimeters of aluminum, 1 layer sole leather, 4 layers chamois skin, time 30 minutes. On the following day his systolic pressure registered 150. From the date of his first x-ray treatment, all of his symptoms had improved, and the improvement continued progressively.

His appetite and nutrition improved, his skin assumed a sort of rejuvenation, his headaches ceased and his ataxia disappeared. He no longer suffered from dyspnoea on exercise or at times of falling barometer, and his wakefulness was ended. There appeared to be a complete symptomatic cure, which I did not then hope could be permanent. Whether or not it is permanent I leave to the judgment of the reader. In July, 1917, his systolic pressure registered 160; in July, 1918, 160; in September, 1919, 165; in July, 1920, 170. And from his first treatment to date of this report there has been no recurrence of his symptoms.

Case 2. Man, aged 79. Banker. Carcinoma of foreskin, duration 4 months. There had been excision of the lesion with prompt recurrence. There was no metastatic involvement determinable. A well built man weighing 180 pounds. Occupied daily in a bank. He had walked to and from the bank a distance of about 1 mile, and stated that this was increasingly difficult. Dyspnoea caused quite a distress when he appeared at my office. On that date, Nov. 8, 1916, he had most of the subjective and all of the objective symptoms of arterio-sclerosis. Systolic pressure was 206 and a pulse of 112: a pump stroke pulse. He was treated with the intensive soft ray dose to the lesion, the filtered massive dose to the penis and to each inguinal region, on Nov. 8, 1916. The technique of the treatment of the inguinal regions was 18 milliamperes, 15 inch focal distance, 9 inch backup, filter, 5 millimeters aluminum and 1 layer sole leather, time 20 minutes. There was no skin reaction resulting from the treatment. The hard ray dose to the penis was repeated on Jan. 7, 1917, although the lesion had disappeared and a cure was believed. Under effect of his systemic reaction his systolic pressure dropped to 160 and later reacted to 170, which he registered on Jan. 7, 1917, two months after his initial treatment. His heart action improved correspondingly, appetite, nutrition and elimination became normal and dyspnoea no longer occurred. Has continued his vocation to this time. I sought an interview with him and on July 29, 1920, I found him with a pressure of 180. He stated to me that his appetite was uniformly good, his digestion and elimination perfect, that he slept well, never suffered shortness of breath except on violent exercise and that he perspired as freely as in his twenties. I deem it proper to direct attention to the fact that this man is now 83 years old and that the sole treatment he has received, capable of affecting his blood pressure, was the prophylactic massive doses to his inguinal regions on Nov. 8, 1916. His usual medical attendant thinks he is in perfect health.

Case 3. Man, aged 64. Carcinoma of lower lip at muco-cutaneous margin involving almost the entire margin and invading the inner labial surface. Metastatic tumor in left sub-maxillary gland. Had been a victim of rheumatic fever from which he had never entirely recovered; much stooped from rheumatic sequelæ in upper part of spine. His treatment consisted of a massive filtered x-ray dose to the entire jaw and the intensive soft ray dose to the lesion, followed on the succeeding day by destruction of the salient lip tumor with the electro-cautery.

At the beginning of his treatment his systolic pressure registered 180 and his skin was dry and hard. There seemed a great probability of additional metastasis, undeterminable at that time, for which reason I gave a doubtful prognosis and proceeded to treat him to the limit of tolerance of the skin with the massive filtered x-ray dose, using a technique generally similar to that reported heretofore. First treatment Jan. 26, 1920; on the following day systolic pressure was 155, reacting to 160 on Feb. 1. Treated Feb. 2; on following day systolic pressure was 130, reacting to 155 on Feb. 17. On March 2 it registered 155 and on March 10, 160. Treated March 17; on following day his systolic pressure was 120; March 20, 140; April 13, 120, and on April 29, 155. Metastasis had developed in the right sub-maxillary gland and on May 11 it was resected, having been treated on the previous day with a very heavy massive dose, since which time he has had no further treatment. Following this reaction his systolic pressure registered, on May 29, 140; June 11, 145; July 29, 142. During this treatment his skin has become normal in appearance and function, his appetite and nutrition have improved and he is steadily gaining weight.

Case 4. Man, aged 76. Carcinoma, left side of neck, a very large lesion of 12 years' duration. Patient was quite feeble; had poor appetite, digestion and elimination, a dry, hard and non-elastic skin, a distinct mitral regurgitation and a pulse of 112. He had a systolic pressure of 180. Treated April 5 and 6 with the massive filtered x-ray dose according to the technique used in the previous cases except that the dose was divided, half being given on successive days for the reason that I feared to give him the maximum dose at a single treatment on account of his heart lesion and his feeble condition. After an interval of 5 hours following the first half of his dose his intra-arterial pressure had fallen to 166 and his pulse to 90 and he showed no ill effects, but to the contrary, showed evidence of comfort and well-being. Following the second half of his treatment his pressure fell to 155, and reacted to 160, 48 hours later. His appetite improved and his skin at

once became active. He remarked at the time that his palms were moist for the first time in several years. Following a treatment on April 8, with the intensive soft ray dose to the lesion, there was a slight lowering of pressure but it reacted within 48 hours to 160, at which point it held quite steadily until June 7, when he was again subjected to the massive filtered dose. After an interval of 24 hours his pressure dropped to 145, reacting within a few days to 160, at which it remains. There was immediate and marked improvement in the rate and volume of his pulse, continuing to this time. He is greatly improved in vigor and has gained several pounds in weight.

The two latter cases, 3 and 4, are of too recent date to be of distinct value in themselves and would not have been reported except in sequence to the others which date from 1916. They are to be taken for what they are worth in the judgment of the reader. As a result, however, of my observation of the older cases, I have every reason to expect a permanent reduction of intra-arterial pressure in the latter cases.

I shall not attempt to elucidate the chemical or physical action by which intra-arterial pressure is reduced by the Roentgen rays. Any effort on my part toward solution would be purely academic. It may be that it will never be satisfactorily explained; but if it cannot be explained, we may console ourselves with the reflection that there are many other things which are of great service to humanity which are likewise unexplainable. I dare to hope that here is a new field of usefulness for the Roentgen rays, which, though its action may never be explained and may remain in a manner empirical, will serve as a curative agent for a malady for which there have heretofore been remedies of only a palliative character.

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DISCUSSION

DR. CHARLES GRANDY (Fort Wayne): I think Dr. McCoy has brought out a very interesting thing in the effect on the blood pressure. It seems from this treatment that we are not attaching much importance to the effect on the arteries. In looking over the cases you notice that he does not pick out any special place to treat them for the pressure, but simply treats the lesions. It seems to me there ought to be some place on the body, if it is to be used for the pressure, where we could put the rays and so get a marked reduction. It seems to me we

cannot explain the reduction of blood pressure from the Roentgen ray itself in these cases, when one had a lesion in the ear and two in the joint. Another thing, we are using a very dangerous method, and if everyone tries to use it there will be a lot of disastrous results that will be worse than those from high blood pressure.

DR. GRACE LINE HOMMAN (Laporte): In looking over the literature I find that Portaine, in 1913, spoke of the beneficial effect of the Roentgen rays on high blood pressure. In 29 subjects treated, only four after slight improvement returned to their original pressure and remained there. Of the remaining number, some were cured and some showed considerable improvement. In the arterio-sclerotic group with albuminuria he thought the treatment was contraindicated.

I know more about the action of radium than I do about the Roentgen rays. We found in using radium that we had to be very careful in the cases that had nephritis. Some had very severe reactions and some developed uremia and died.

THE ASSOCIATION OF FREE HYDROCHLORIC ACID AND GASTRIC MOTILITY IN GASTRIC DISEASES*

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There are certain statements handed down from year to year by the recognized authors, associated with the diagnosis of gastric diseases, so firmly established that we find it almost impossible to get away from undue reverence of their reliability on the subject in question.

In the time allotted I will try to refute, from my own personal experience, a few accepted symptoms, clinical and laboratory findings, used in the diagnosis of gastric diseases.

My observations cover some 400 cases of gastric diseases seen while stationed at Base Hospital, Camp Shelby, Miss., plus the cases seen since my return to civil practice. These cases range from acute and chronic gastritis to acute and chronic peptic ulcer.

Pawlow's work on the phenomena of secretion has cleared up many errors of the older observers, and has given to us a fuller understanding of this important physiological function. He proved in his experiments that stimulation of the peripheral end of the severed vagus, in which are the secretory fibers of the gastric glandularis, produced a secretion of gastric juice, even after a latent period of several moments. By producing a fistulous opening in the

oesophagus of a dog, so that the meal never reached the stomach, it was found that the meal caused an abundant flow of gastric juice as long as the vagus was intact, but when the vagi were severed the false meal did not produce this abundant flow of gastric juice, therefore proving that we must consider to a great extent the effect of the sensations of taste, smell, sight of food, thought of food within the mouth, as reflexly stimulating the secretory nerves of the vagus. This is due to conscious sensations. Under normal conditions as long as food remains in the stomach the gastric juice is secreted proportionately to the quantity and quality of the food. There are certain substances contained in foods which are called secretogues, which are capable of stimulating further secretion; how this is brought about has not been explained to the satisfaction of most of us, but its effect on the mucous membrane is supposed to produce a substance known as gastric secretin, which is taken up by the blood and carried to the gastric tubules, stimulating their activity. Pawlow shows in his work that the gastric secretion is continued until all food has left the stomach and also for a short time longer during digestion in the small intestine.

In studying the gastric motility we find the first movements of the stomach during digestion are the rhythmic contractions of a peristaltic nature that begin slightly in the fundus and pass with increasing force to the pyloric region; in this the circular fibers are the most active. The result of these movements is to mix the food with the acid gastric juice which reduces the food to a thin liquid mass—the chyme. The pylorus then opens and this fluid mass is delivered into the duodenum in small jets. According to Cannon, this irregular act of the pylorus occurs in the human about every twenty seconds and is dependent upon the acidity of the chyme and the consistency of the food directly inside of the pyloric valve at that time. Bassler has shown by x-ray and gastric analysis in atrophic gastritis with an acidity that the food or chyme emptied, and that the pyloric opened as readily as when acid chyme was present. This is at least an argument for some other theory in regard to the opening and closing of the pylorus.

We have always been told by the authorities on gastric diseases that whenever hyperchloridia is present, we may expect to find hypermotility, and associated with hypochloridia—hypomotility. Barker tells us that "If stomach contents are more acid than normally, the hyperacidity might arise, (1) From increased amount of gastric secretion (hypersecretion); (2) From qualitative change in the acid strength of the fluid secreted; (3) From increased motility of the stomach leading to early removal of the

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ingested fluid that ordinarily mixes with the secretion and diminishes the acidity—(hypermotility)."

Einhorn, Riegal and Ewald tell us that hyperchlordydia is a very common factor in ulcer of the stomach, while Kemp says that "hyperchlordydia occurs in 95 percent of all gastric ulcers and that hypermotility is always present, providing there is no complication."

Hypersecretion and hyperacidity have long been associated with chronic duodenal ulcer. Dr. Will Mayo says of duodenal ulcer, "The symptomatology of duodenal ulcer is so well known that in the typical cases failure of diagnosis should not occur. The hunger pain, food relief, hypersecretion and hyperacidity, leave little doubt as to the character of the lesion." Boas and Kemp also tell us that hyperchlordydia is invariably the rule in duodenal ulcer.

The Rehfuess technic was used in all tests for gastric analysis—using the intervals 30, 50, 60 minutes, up to three-hour interval. All cases had from six to ten analyses, taken at different periods of the twenty-four hours. Tests were made for free HCl, combined HCl and for total acidity.

Motility was determined in all cases from fluoroscopy and x-ray examinations.

In acute gastric ulcer, where the symptoms indicated the first attack, we found hyperchlordydia in 60 percent of the cases, but associated with this we found hypomotility—demonstrated chiefly by the fluoroscope.

In chronic gastric ulcer, irrespective of location of ulcer, we found hypochlordydia with hypermotility: in 80 percent of the cases, also in chronic gastric ulcer, where we had hyperchlordydia we found hypermotility—rather suggesting that the motility is not in any way due to the increase or decrease of free hydrochloric as found in chronic gastric ulcer.

In chronic duodenal ulcer we found hypermotility in 75 percent of the cases with hypochlordydia or *achylia gastrica*.

In our true achylia we found hypermotility present in all cases.

In acute and chronic gastritis, irrespective of cause, hyperchlordydia and hypomotility and hypochlordydia with hypermotility was the usual combination.

Case No. 10. Male, age 19. Aug. 1918. F. H.:—F. L., M.D.—Cause unknown. Past H.:—Usual diseases of childhood. Has been troubled with stomach for years. Had to be careful of his diet. Could not eat sweets. Present history:—Entered army July 10, 1918. Tried to drill but could not on account of increased stomach disturbances. Entered hosp. Aug. 1, with sick stomach, vomiting and pain in the epigastrium. Pain was dull in character

and rather constant. Sometimes relieved upon taking food, but at other times it would increase the pain. During the last three weeks the patient has vomited after each meal. Physical examination:—Poorly developed and anemic. Tender over upper abdomen. Could feel no mass. Gastric analysis:—Free HCl—45. Total—60. Free HCl—30. Total—50. Free HCl—30. Total—50. Free HCl—0. Total—35. Free HCl—10. Total—35. Fluoroscopic and x-ray: Hypermotility. Pronounced cap. Small ulcer on ant. surface of the stomach, near pylorus. Diagnosis:—Gastric ulcer, chronic. Held for obs. for six weeks. Continued to vomit on liquid diet but had less pain. At no time did we find blood in g. c. or in stool exam. Discharged S. C. D. Sept. 1918.

Case No. 56. Male, age 28. July 1918. F. H.:—Negative. P. H.:—Usual diseases childhood. Malaria—1912. Stomach trouble for seven years. Present history:—Entered hosp. July 30, 1918, complaining of pain in the epigastrium with nausea and vomiting. Has been worse since June due to his entry into the service, where he was compelled to drill and eat coarse food. Has vomiting after meals with gradual loss of weight. Physical exam.:—Tender over stomach area. No mass. Gastric analysis:—Free HCl—0. Total—30. Free HCl—0. Total—30. Free HCl—0. Total—10. Free HCl—10. Total—30. Free HCl—10. Total—40. Fluoroscope: Hypermotility. X-ray: Small ulcer on ant. surface, two inches from pylorus. Diagnosis:—Gastric ulcer, chronic. Patient improved under rest and treatment. Later transferred to non-comb. unit.

Case—MOULTON. Age 63. F. H., Negative. Past H.—Usual diseases childhood. Tonsillitis very frequent. Typhoid as a young man. Swallowed carpet tack when about thirty years of age. Had pain in abdomen for some time after this. Had an epithelioma of lower lip in 1904. Present history:—Has had trouble with stomach for 40 years, with occasional pain in epigastric region—these were periodical. As time passed pain was more frequent and a little more severe. Has had some burning in stomach and some hot water brash. Present complaint:—First symptoms of trouble was dizziness and nausea, then in about ten minutes bowels felt like they wanted to move. Contents of bowel movement was livery, black and tarry. Following this he became deathly sick and vomited blood. For two weeks patient passed tarry stools but vomited no more blood. Physical exam.:—Weight 230 pounds. Tenderness over epigastrium, but more tender just to the right of median line. Pain is relieved upon taking food into the stomach. Pain comes on about 4 to 6 hours after meal. Gastric analysis:—

Free HCl—0. Total—40. Free HCl—10. Total—50. Free HCl—20. Total—60. Free HCl—15. Total—80. Fluoroscope—Hypermotility. X-ray—Suspected chronic duodenal ulcer, chr. appendicitis with adhesions. Operation revealed small ulcer in first portion of duodenum.

Case—DAVISSON. Age 51. F. H.—Negative. Past history:—Began having stomach trouble about six years ago. Would have sick stomach and vomiting after meals and pain about an hour after meals. Present history:—Complains of vomiting three to four hours after meals but never vomits food. No blood in vomitus. Has nausea about an hour before vomiting. Sometimes nausea comes on suddenly and vomits. Has lost about 20 pounds in the last year; has sensation in region of the stomach as if it were fastened to his backbone and is all the time drawing in. Gastric analysis:—Free HCl—0. Total acidity, lactic positive. Free HCl—0. Total—10. Free HCl—0. Total—10. Fluoroscope:—Constriction at pylorus. Suspected ulcer which has undergone degeneration. X-ray:—Chronic gastric ulcer. Hypochloridia with hypermotility.

Case—PATTERSON. Age 55. F. H.—Negative. Past history:—Began having stomach trouble about five years ago. Has misery in epigastrium and complains of bloating with gas. Pain would get so severe at times that he would have to have relief. Present history:—Began about three weeks ago with pain in region of stomach which was followed with vomiting. Relieved upon taking soda or after vomiting. Pain does not come on at any special time and is always increased upon taking food. Physical examination:—Chest normal. Abdomen normal, except for some slight tenderness over the epigastrium. Fluoroscope—Hypomotility. X-ray:—Normal gastro-intestinal tract. Gastric analysis:—Free HCl—80. Total—115. Free HCl—80. Total—115. Diagnosis:—Gastritis chronica, hyperchlordia with hypomotility.

Case—MOORE. Age 63. F. H.—Father died cancer jaw age 78. Mother died age 78, cause pleurisy. Past history:—Scarlet fever, complication otitis media. Typhoid fever age 25. Has had stomach trouble for 20 years. Has bloating after meals and at times has pain which comes on an hour to two hours after meals. Has burning and gnawing sensation in stomach which is often relieved upon taking food. Has periods of vomiting which are relieved upon lavage. Present history:—Patient has been having severe pain in the stomach with vomiting. Pain began about one week ago but has only been severe for 24 hours. Following the severe pain has begun vomiting blood. Is very tender over epigastrium. Vomiting of blood ceased under morphia and cold packs to the

abdomen. Gastric analysis:—Free HCl—0. Total—50. Free HCl—10. Total—50. Free HCl—0. Total—40. With the Boas test meal, stomach is empty in 30 minutes. Hypochloridia with hypermotility. Diagnosis—Chronic gastric ulcer.

Case 19—Male, age 26. F. H.—Negative. Past history:—Hookworm 1915. Malaria 1913. Present history:—Entered hospital July 10, from command, complaining of a gnawing sensation which is accompanied by burning. Symptom is relieved upon taking food. Symptoms return about three hours after eating. Has a feeling of weakness and nausea when stomach is empty. Gastric analysis:—Free HCl—10. Total—50. Free HCl—10. Total—50. Free HCl—0. Total—40. Free HCl—10. Total—50. Free HCl—0. Total—35. Free HCl—0. Total—40. Hypermotility. X-ray—Ulcer lesser curvature. Hypochloridia with hypermotility.

Case No. 44—Male, age 24. F. H.—Negative. Past history:—Has had stomach trouble for five years. Cannot eat sweets and coarse foods. Does fair on liquids. Present history:—Entered hospital June 6, with pain in upper abdomen, nausea and vomiting. No blood in vomitus nor in stools. Physical exam.:—Poorly developed, abdomen tender over epigastrium, with some general tenderness over entire abdomen. Gastric analysis:—Free HCl—80. Total—100. Free HCl—70. Total—80. Free HCl—75. Total—80. Free HCl—80. Total—100. Fluoroscope—Hypomotility. X-ray—Ulcer chronic lesser curvature. Hyperchlordia with hypomotility.

Conclusions:

Carmen found in his work on Roentgenologic determination of gastric motility that hypermotility with achylia gastrica or hypochloridia was diagnostic in chr. duodenal ulcer, and that hypomotility is very common in conjunction with acute ulcer of the stomach, but that in carcinoma of the stomach, where we usually have hypochloridia, he finds hypermotility.

In our cases of chronic duodenal ulcer we also find hypermotility with hypochloridia or achylia gastrica.

In acute ulcer of the stomach hypomotility with hyperchlordia in 60 percent of the cases.

In chronic gastric ulcer we found hypermotility with hypochloridia in 80 percent of the cases, also in most of the cases of hyperchlordia we found hypermotility, all of which indicates that the increase or decrease of free HCl in chronic ulcer of the stomach has nothing to do with the gastric motility.

In our cases of gastritis chronica, regardless of cause, we found the following: Hyperchlordia with hypomotility, and hypochloridia with hypermotility. We were never sure as to our

cases of so-called gastritis chronica, because even in the absence of the x-ray findings, it is possible that we might have had a small peptic ulcer.

We found that we could not depend upon the symptoms of hunger pain, food relief, hypersecretion and hyperchlordydia, as laid down in our modern text books, as the cardinal symptoms of chronic duodenal ulcer.

We also found that the great majority of cases of burning and gnawing sensations in the stomach were either achylia or hypochloridia rather than the accepted rule of hyperchlordydia.

DISCUSSION

DR. FRANK H. JETT (Terre Haute): I have tried hard to believe in gastric analysis, but will have to admit that I have not succeeded. Just recently I went through 200 gastric analyses at the Mayo Clinic; spent more than a day on them and tried to draw conclusions, but found I could draw no conclusions whatever from the single gastric analysis.

If gastric analysis is going to gain a place in diagnosis, it must point the way at least sometimes when everything else fails. Just as in the symposium we had on tuberculosis of the kidney. The x-ray pointed the way in the dead tubercular kidney when the cystoscope failed, when in fact everything else failed. The cystoscope pointed the way in cases where the x-ray failed. It is not hard to think that the laboratory points the way in these cases when both cystoscope and x-ray would fail. This is just what gastric analysis does not do.

A controversy about a diagnosis from hyperacidity and increased motility of the stomach has been fought out by Carman and George. Carman claims that by stomach movements and gastric analysis, he can make a diagnosis. George used serial radiography, and at least to me, has proved that Carman is wrong. The plates that have just been shown on the screen, each and every one, could have been a normal stomach, and the diagnosis should not have been made on the plates unless these were part of a series of plates which proved the filling defect to be constant. It is not unusual, especially in a nervous patient, to find a constant filling defect due to spasm. These cases must be checked with repeated serial plates, also by giving belladonna before the plates were taken. The filling defect to be taken as a real lesion must be constantly present in every plate, also the same general contour.

I recently saw a case of duodenal obstruction from gall bladder stones. This case had a very high motility of the stomach and a very high acidity, but as proved by operation, there was nothing the matter with the stomach or duodenum, simply obstruction from gall-bladder adhesions.

As to acute and chronic gastritis, I am free to confess I do not think they exist except the gastritis of corrosion. Acute and chronic gastritis, so called, is undoubtedly a symptom of appendix, gall-bladder, duodenum, pancreas, ulcer and cancer of the stomach.

It was Monahan who said you should make a diagnosis of duodenal ulcer by telephone. This perhaps is not exactly true, but it does emphasize what Monahan intended to convey. That is, that there is nothing so important in the diagnosis of high abdominal disease as the right sort of a history. The history must consist of what the patient says of his own accord, this followed by a cross examination in the same manner an attorney gets the truth from a witness on the witness stand. A history taken this way by an acute diagnostician, well interpreted, is perhaps worth more than all the other examinations that can be made of the patient. I do not mean to say that the x-ray and the various other methods of arriving at conclusions should be discarded, but I would warn you to be careful when they disagree with a well taken, carefully interpreted history.

DR. H. O. PANTZER (Indianapolis): I am charmed by the critical attitude of the essayist in presenting his subject. However it would seem to me as yet we dwell too exclusively upon what is apparent in the acute clinical picture. Shall we not seek deeper for what is the fundamental pathology? Just recall how differently in size, position and form the stomach appears in the different pictures shown on the screen. May, or even *shall*, these gross anatomical irregularities not suggest to us disturbances of function which, last in themselves, again invite visitation by bacteriemic and toxemic diseases? My attention early was called to this possibility. In the early nineties I operated upon a man who by various medical men, including myself, was supposed to have cancer of the stomach. The operation revealed a stomach dislocated by bands of peritoneum which at one point constricted the stomach, dislocated and deformed it so as to create manifest interference with its motility and function. No cancer was found. The release of the constricting bands was studiously attempted, and resulted in what seemed complete cure through many years of observation thereafter. Since then I have closely observed the anatomical irregularities pertaining to the stomach, duodenum and the various abdominal organs, and find myself warranted in *most* cases of ulcer of the stomach or duodenum *not* to excise the ulcers, but only to release bands and membranes where such interfere with the free function of the afflicted organs. There is further support given to my views as to the fundamental pathology in such

cases by their history; namely, that in a large percent functional disturbances of these organs can be traced back to *infancy*.

DR. W. H. FOREMAN (Indianapolis): The diagnosis of ulcer of the stomach or duodenum is a very complex thing, as I have many times said. You must take into consideration the whole human organism. For instance, take motility. There are so many things outside of the stomach that can modify the motility of the stomach, and very few things that can modify its motility in the stomach itself. We find some cases with high acidity that have high motility, and some cases with high acidity that have low motility. On the other hand, in cases of achylia we have very marked motility. Again, gall-bladder disturbance, appendicitis, bowel or pelvic trouble, a disturbance of the heart or lungs, can all cause a hypo- or hypermotility, so that acidity has very little to do with gastric motility. If you have a tuberculosis of the kidney you may have a disturbance of motility of the stomach and acidity present, so you cannot make a diagnosis of ulcer, duodenal or gastric, solely upon the basis of findings in the stomach itself. You must go outside of the stomach and consider it from every physical standpoint. I do not believe that duodenal ulcer and gastric ulcer are peptic ulcers at all. That is, they are not digestive ulcers. I do not believe that acidity has much to do with the formation of ulcer, but I do believe that acidity has considerable to do with the healing of that ulcer, and that by neutralizing the acidity you get better healing of the ulcer. Ulcer has been demonstrated to be due to infection primarily.

Also in regard to sensibility. Some persons with ten points free acidity may have pain; others with fifty points may not have pain; and still others with practically no acidity may have pain. There is more than one element producing pain in the stomach. For instance, if you have a frost-bite on your toe, one day it will hurt and the next day it will not. Why not? The chilblain is there, but there is a difference in sensibility. Likewise with ulcer of the stomach or duodenum there is a difference in the sensibility to pain in different individuals and in the same individual at different times, regardless of the percentage of free acid present.

In regard to secretions, there are so many diverse causes influencing stomach secretions that we have to make a large number of examinations to come to any decision worth while. I put less confidence today than a few years ago in the chemical examination of stomach contents, because there are so many conditions that can cause hyper- or hypoacidity of the stomach outside of the stomach itself. You surgeons know that a chronic appendix can

cause hyperacidity, and likewise a gall-bladder disturbance or a lung disturbance can cause hyper-acidity, and so all through the list. I do not believe with Monahan that you can diagnose ulcer over the telephone. It is a complex problem and you must work it out from every possible standpoint inside and outside the stomach.

DR. ALFRED S. JAEGER (Indianapolis): The acidity in duodenal or gastric ulcer is an incident, not a cause. The longer I study gastric surgery for ulcer the more I am inclined to believe that the real cure of gastric or duodenal ulcer is not due to the surgery *per se*. Surgery is an aid in correcting abnormal configurations, and in the past we have fooled ourselves into the belief that resections, or gastro-enterostomy, etc., has cured gastric ulcer, when the fact is that the operation simply relieved the anatomical irregularities and gave Nature a chance to bring into force its recuperative powers; but the surgery alone does not cure; the more I see of these cases the more I am inclined to believe that the ultimate cure of the condition is medical.

PUBLIC POLICY AND LEGISLATION*

A. M. SULLIVAN, M.D.

ATTICA, INDIANA

We have in our County, District and State Medical Associations, and in the American Medical Association, organizations that from year to year have been successful in having laws passed in this and other states that have raised the requirements of physicians to such a plane that the present day graduate physician is well trained. Yet the protection afforded the physician by the laws of our state seems vague and indefinite, with little or no effort of enforcement, and it would further appear that every stipulated fee established by our legislatures for the benefit of the physician has been paltry and insufficient.

It always seemed to me in seeking advice or help from our local county and district societies that we should have within our state organization a high court of appeals that would functionate in helping or advising us in all emergencies. After perusing the committee appointed by our state organization each year it would appear that every phase of our welfare is taken care of. Theoretically, this is so. Practically, it is not. Our failure to secure results in these affairs is due to a lack of proper co-operation between the state committee members and the local societies. The mental attitude of the local society is to refer matters to the state committee with the feeling that the local

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society's responsibility ends at that point. The mental attitude of our state committee is not to interfere with the activities of local societies, and as a result we will have some diplomatic correspondence, the "buck" is passed back and forth, and we have made no progress.

We are inclined to be just a little hostile to those who have dominated the medical politics within our state society for several years. We admit their cleverness and political ability within our society, and we feel that if the efforts of these capable men had been spent for the interest of the society in general and the physicians in particular, there would be little occasion for papers such as I am presenting. Dominating factions are necessary evils, but a faction should stand for something other than the routine necessary to keep the organization functioning.

As to the State Board of Medical Registration and Examination it has been our observation that a graduate physician is held in restraint or his license revoked for failure to comply with some minor requirements of our laws, which is as it should be. In these cases the Board functionates. We have further observed that when it comes to illegal, unauthorized, non-educated, non-graduated, non-licensed practitioners, as chiropractors, faith doctors, some nurses, and other cults and isms, our State Board of Medical Registration and Examination seems helpless. It seems to be the opinion of our State Association that our State Board of Medical Registration and Examination is not charged with enforcing the medical practice act, although the statute specifically charges them with the responsibility of enforcing same.

We have further observed in the State Board of Health laws and rules that the physician's work and fees are entirely according to the ideas of that department. Evidently our State Association was not co-operating with the Health Department when these laws and rules were made, as our interests have not been properly safeguarded. This is especially so in regard to fees, as there is no fee in making returns for births and infectious diseases, while fees for health work and health officers are from 200 to 500 percent below a minimum fee scale. In fact, the fees of health officers and for health work are so inadequate that on many occasions it is difficult to secure a local board, while those serving do so reluctantly, usually rendering the class of service for which they are paid. The writer is of the opinion that our State organization should have a standing committee co-operating with the Health Department so that the interests of the physician may be properly protected.

We country practitioners realize that the present Workmen's Compensation Act was written and legislated by the insurance companies; that

almost every interest of the insurance company is guarded specifically while the interests of the physician are vague and indefinite.

As an illustration, the writer recently had occasion to sue an insurance company for services arising out of the Compensation Act. A judgment was rendered in my favor by a single member and later by the entire industrial Board. An appeal was taken on this decision to the Appellate Court who decided: "The Industrial Board is without jurisdiction to decide on fees of physicians where the employer or insurance company had referred the case to a physician." Holding such power abridged the right to contract. They further held that in the case of an injured employee treated by a physician other than the one secured by the insurance company or employer, the fee of the physician would be subject to the approval of the Industrial Board. Another phase of the Workmen's Compensation Act wherein the insurance companies evade the strict compliance of the law is the employment of nurses for first aid work. Very few of these nurses are working under the direction of a licensed physician, rather is the physician subservient to the nurses. Is our State Association helpless in this matter?

As to a health insurance law the country practitioner does not want it, but if we are so unfortunate as to have a law of this kind we hope our State Association will make the best of a poor bargain.

The outlook of the physician in the smaller towns is discouraging as to a livelihood and scientific development. When a student spends from seven to nine years in school, in addition to his high school work, that he may be a better physician or surgeon, he is going to look for the bigger fields, and especially for hospital facilities. We realize that without hospital facilities our opportunity to progress scientifically and financially is limited, and we are requesting that the present county hospital law be amended so that we may have county and township hospitals. This would give us more hospitals in each county, and would help to keep the present day graduate physician in the smaller community.

There has been a rather poorly organized effort by the retail merchants to have a garnishee law passed in our state. Such a law would increase the cash receipts of physicians each year from 5 to 10 percent. Is not such a law worthy of our support?

In summarizing permit me to offer the following recommendations to our State Association:

1. Propaganda by articles in local papers, public speakers, and moving picture work that would better enlighten the public concerning the ability of duly licensed physicians. This

propaganda to be under the supervision of the Committee on Public Policy and Legislation of our State Association.

2. Revision of the medical practice act in the following manner: The State Association to direct the Committee on Public Policy and Legislation to secure a competent attorney who shall draw up a Medical Practice Law that shall be approved by this committee, and endeavor to have the state legislature pass said bill.

3. A law revising the power of the State Board of Medical Registration and Examination, requiring continuous attendance of one member of board during entire year. Also increase fees of board in conformity with fees of successful physicians.

4. Appoint special committee for board of health work. Otherwise assign this work to the Committee on Public Policy and Legislation or the Committee on Industrial and Civic Relations. Recommend to our Legislative Committee that all fees in board of health work be increased at least 300 percent, also State to pay fees for birth returns and returns for infectious diseases.

5. Amend Workmen's Compensation Act that the Industrial Board may have the power to regulate fees of physicians in industrial work. Specifying that fees shall be those prevalent in that particular community. That the Industrial Board shall have jurisdiction in settling all fees of physicians arising out of Compensation Act. That nurses or other regularly employed first aid attendants are to act under the written instructions of a duly licensed physician. That in all accidents, certificate of final discharges or form No. 26 must be filed with the Industrial Board by a duly licensed physician who must have personally examined the case. That the Committee on Industrial and Civic Relations be charged with the responsibility of co-operating with the industrial board.

6. Amend present law for physicians' fees for insanity inquests, increasing fee to \$15.00 to \$25.00 per diem and \$.15 for every mile necessarily traveled. Present law allows \$2.00 to \$3.00 per diem and about \$.05 per mile.

7. Amend present county hospital law that we may have both township and county hospitals. That one or more adjoining townships in one county or adjoining counties may establish a hospital, under similar procedure of a county hospital except that townships involved bear expense of same.

8. Revision of fees for coroners' office, increasing fees to \$15.00 to \$25.00 per diem and mileage to \$.15 per mile. Present per diem is from \$2.50 to \$10.00 and mileage \$.05 per mile.

9. That the Committee on Public Policy and Legislation shall be aggressive toward securing a garnishee law.

10. That our Association combat any legislation limiting physicians in dispensing of drugs.

11. That we recommend the greatest restrictions on our reciprocal relations with other states.

12. That one or more years' hospital service be required of all applicants for license, this in addition to the present requirements.

13. That the course on medical jurisprudence at Indiana University be revised.

14. That our State Association shall lend its efforts in the development of the postgraduate medical course at Indiana University.

To accomplish any or all of these things will require considerable time, money and thorough understanding and co-operation between the State Association and our county societies. Is not our interest or welfare sufficient that we should employ an all-time secretary or field man? We should gradually increase the dues of our State Association each year in order to give us better service.

We should co-operate in our legislative work with the dentists, druggists, veterinarians and chemists, for we have many things in common.

In asking our state legislature for reasonable protection and compensation, we feel the high standard of the practicing physician in Indiana has merited the right of consideration.

DISCUSSION

DR. E. M. SHANKLIN (Hammond): Doctor Sullivan certainly has covered a variety of subjects in his paper. On some of the matters I agree with him, on others I entirely disagree, while on others I am willing to meet him half-way.

He speaks in the beginning paragraphs of his paper about what I call the "Amen corner" of the State Association—the little coterie of individuals who seem to control the policies of the Association. I feel that it is absolutely essential for the success of any organization that someone have at least enough interest in the organization to see that its affairs are conducted in a businesslike way, and while we have a membership of 2700 or 2800 in Indiana there are very few members who are really interested in the Association to the extent that they will give of their time and in a number of instances of their money in order to further the interests of the Association. It is such men who are credited with making up the "Amen corner" of the Association.

The doctor speaks of the State Board of Medical Registration and Examination, and of the Committee on Public Policy and Legislation, in a very properly critical way. The fact is, as I see it, there is always an open season for the State Board and the Committee on Public Policy and Legislation. To my notion the fact that

we have an open season is due to the misunderstanding of the average member of the Association as to the duties of these bodies. I will speak first of the Committee on Public Policy and Legislation, and I will ask you to keep in mind four things in connection with this committee. The first is that the members of this committee are members of this Association and men engaged in the active practice of medicine for a living. The second is that there is no remuneration, no per diem. Third, there is no expense account for the members of this committee, and fourth, the interest of no single member of this committee is any greater than the interest of any other individual member of the Association. I think if you will bear these four things in mind it will clear up a great deal of the criticism of the workings of this committee.

One other thing. I will take you back to the 1917 session of the Indiana Legislature, when it looked as though a bill known as House Bill No. 154 was going to go through the Legislature without any opposition, a bill allowing a certain cult a separate licensing board in the State. I was a member of the Legislative Committee at that time. I was in Indianapolis when the committee was in session and we sent out, by telegram, by special delivery letters, and by telephone an appeal to every County Society in the State asking that a representative be sent to Indianapolis the next day. The situation looked very grave indeed. At the appointed time of the meeting less than one-third of the counties of the State of Indiana had representatives there. In other words, less than one-third of the county medical societies of this State were sufficiently interested to have representatives at this meeting. Fortunately, we were able to sidetrack the bill and everything was lovely, but the fact remains that less than one-third of the profession was with us in this thing.

I will go a little further. I hold up five fingers, and on those five fingers I can name every man in the State of Indiana who in 1917 (outside of this one little session in Indianapolis) did any actual work toward protecting the interests of the men in the profession in Indiana. Just five fingers are required to account for the men who were interested to that extent.

Now the doctor speaks of the Board of Health, and he speaks of a thing I never could quite understand. I do not see why a doctor should be paid for birth returns, death returns, etc. I believe the interest of the medical man in sanitation and public health in general should be great enough to permit him to want to bring the State of Indiana up to the standing of other States in the matter of these returns. Take the matter of birth returns. Up in my town the

doctors charge \$35 for a confinement case. It seems to me that that is enough to include pay for the moment or two necessary to take down the statistics that are required to be sent in. I do not see why we should ask pay for that. It has been my observation that a great many so-called Board of Health secretaries are paid a great deal more than they are worth anyhow. The reason they are not paid more, in my opinion, is because there is an unholy scramble for the jobs. Every time there is a change of county or city administration in the ninety-two counties there is a scramble for a job that pays from ten dollars a year up. That does not apply every place. I recall one place in Lake County where the doctors got together and said they would not take the job of poor doctor for \$100 a year, and the result was that when the time came to make the contract no one wanted it, and instead of paying \$100 they had to pay \$500, which was pretty fair pay for the work.

I believe the industrial compensation law of the State of Indiana is a long step in the right direction. I do not believe it is a one hundred percent law; there are a lot of things about it I do not like; but I believe as we have experience with the Board, particularly in the matter of enforcing the collection of claims, that most of you will change your opinion. We were talking last March in South Bend, and Doctor Hollis of Hartford City had much to say about some insurance company with whom he was having a quarrel over the matter of a bill. This topic was under consideration at a dinner that night and the doctor was advised to sit tight and he would get his money. He tells me this morning that the bills were all paid.

As to the wording of the Act itself, as I remember, the Act states that the medical or surgical fee in railroad or industrial cases coming under the Compensation Act shall be that which prevails in the community. That is just the recommendation the doctor asked for. Doctor Oliver, at that time President of the State Association, gave to the Board what he considered a fair fee bill covering a wide range of surgical cases, and the Board adopted that bill a few years ago and since that time four of the members of the Board have told me personally that they considered that fee bill was out of date and they were not disposed to require practitioners in Indiana to live up to that bill.

As to the matter of publicity, I think it is a good thing, but I want to say that if the people of Indiana could be educated to the idea that their doctor should be a doctor who attends the sessions of his county and state medical societies, it would be the biggest bit of publicity that this Association could put forth.

In the matter of legislation relative to limiting the dispensing of drugs, there has been no

bill in the Indiana Legislature that has passed the House and Senate that has in any way limited the matter of dispensing. Senator Beardsley had a bill, No. 154, which did limit very seriously the dispensing of drugs, but that bill was killed and to my knowledge there has been no bill introduced since.

DR. W. T. GOTT (Crawfordsville): I am very much gratified, indeed, to be here and hear Dr. Sullivan's paper with which, in the main, I agree. However, I feel in duty bound, on account of my connection with your State Board of Medical Registration and Examination, to say something with reference to one phase of the doctor's paper, dealing with the apparent failure of the Board to function.

The function of the Board is two-fold. The first and most important of which is the establishing of an educational standard for the recognition of Medical Colleges and medical students, and to pass upon the educational qualifications of applicants for a license based upon the said standard. Your Board, I believe, has functioned satisfactorily in this regard. At least we have heard no criticism of this phase of the Board's work.

The doctor in his paper has called your attention to the seeming failure of the Board to enforce the second phase of the Medical Practice Act which it is directed to do, by specific provision of the Act itself. The failure is more apparent than real, as you will realize when I call your attention to the fact that the enforcement of the law in relation to the practice of medicine without first obtaining a license so to do, cannot be successfully carried out without the conjoint action of the County Prosecutor.

The Medical Practice Act passed by the General Assembly for the sole purpose of protecting the sick against the machinations of the incompetent and unscrupulous should have the hearty co-operation of all county prosecutors whose duty it is to aid your Board in the enforcement of said law.

The law provides that the prosecutor shall represent the Board in all cases upon proper complaint of the Board. Right here is one of the weak spots in the law. Your Board is always anxious and willing to furnish the evidence to the prosecutor, when it can be obtained, and file the necessary affidavit against the offender. The prosecutor, however, does not always act, when in possession of such evidence, and unless he can be induced to do so, your Board is helpless. The profession and the voters in the county where the violations of law occur are the most potent forces to secure action in such cases. The prosecutor is frequently an inexperienced lawyer and fails to secure conviction by not presenting in a convincing manner the importance of the enforcement of the

law enacted solely for the protection of the public.

DR. HARRY ELLIOTT (Brazil): It seems to me there should be something done to enforce the Medical Practice Act, not to relieve us, but to protect the citizens of the State of Indiana. Personally, I am in favor of all who practice the art of healing having the same fundamental and preliminary training; or of throwing down the bars, and letting any citizen who desires practice medicine without restraint of law.

DR. E. E. EVANS (Gary): I think we ought to make it clear that we are not taking action against the chiropractors or others because we have anything against them, but that we are asking these laws because we are in position to know better than the laity what are good laws for the people. Just as the Bar Association has the power to expel one of its members who does not live up to its rules and regulations, so the medical profession, realizing the injustice that can be done by improperly prepared men practicing medicine, asks that those who practice medicine in Indiana shall be qualified and at least know something of normal and abnormal physical conditions. I think that ought to be made clear.

DR. CHARLES STOLTZ (South Bend): In the Indiana Industrial Law, Sec. 26, exists exactly what the essayist wants passed. Go and read your industrial law. A great many times we demand legislation in regard to something that is already done. All we need is to get behind and enforce that Act.

DR. A. M. SULLIVAN (Attica): The Medical Practice Act was passed in 1897; the law relative to coroners was passed in 1875 and 1883.

In the smaller towns the city attorney usually receives two or three times as much as the entire board of health, and all it requires to be a city attorney is that he shall be a lawyer, which means in Indiana that he must be twenty-one years of age and of good moral character. No education is required. Another feature to be considered is the nurses. We are going to be in competition with the nurses quite a little.

In regard to birth returns, some other states are paying for birth returns and returns for infectious diseases. I think that we ought to come up to the standard of other states.

In regard to the penalty for chiropractors and others that are convicted, I would state that the penalty for a veterinary practicing without a license is greater than for a physician practicing without a license. There is a jail sentence attached to practicing veterinary surgery and medicine without a license.

In regard to this industrial law, I have here the *Northeastern Reporter* 126, p. 494, and it

is well worth while to read that decision. For instance, a doctor here had been doing the work for the Hotel Oliver; someone got hurt and they would call Doctor Terry; there would be a dispute between the insurance company who carried the insurance as to the value of the services rendered. If you could not arrive at a decision with the carrier of this insurance you would have to file that bill with the Circuit

Court; the Industrial Board would have no jurisdiction over that. But if the injured person would go to some other town and hire a physician who had not been doing the work for this particular hotel, then that fee would be subject to the decision of the Industrial Board. I think this Appellate Court decision should be printed in *THE JOURNAL*.

VALUE OF ALIMENTARY TEST IN DIAGNOSIS OF MILD HYPERTHYROIDISM

Ten patients in whom a positive diagnosis of hyperthyroidism could not be made until the basal metabolic rate was known, and three perfectly normal persons were used as controls for the experiment reported on by M. Ford Morris, Atlanta, Ga. (*Journal A. M. A.*, June 4, 1921). The different tests and determinations in both normal and hyperthyroid cases were made under the same conditions, etc. The sugar estimations were made according to the method described by Myers. The basal metabolic rate was determined with the Jones metabolimeter, according to the method described by Jones. The epinephrin test of Goetsch was made in all thirteen cases. The blood sugar estimation before the ingestion of glucose was made after an overnight fast of fourteen or fifteen hours. The results justify concluding that the alimentary hyperglycemia test is of distinct value in the diagnosis of mild hyperthyroidism. In persons whose symptoms and physical findings are suggestive, but insufficient to warrant the making of a positive diagnosis of hyperthyroidism, the obtaining of results similar to those recorded in the ten cases reported may be considered as valuable corroborative evidence of the presence of thyrotoxicosis. The test, however, is not pathognomonic.

EXERCISE TOLERANCE OF CHILDREN WITH HEART DISEASE

The circulatory reactions after test exercises in forty-five normal children, and in 116 children with heart disease, confirmed the results obtained by May G. Wilson, New York (*Journal A. M. A.*, June 11, 1921), in the twenty normal children of the previous study, in all essential points. A working table was formulated of standardized test exercises followed by normal systolic blood pressure curves, without symptoms of dyspnea and fatigue. It was standardized from an analysis of the reactions of an average group of sixty-five normal children according to age, weight and height. The degree of distress and type of systolic blood pressure curve

following standardized test exercises was used as a gage in estimating the exercise tolerance of children with heart disease. Of the seventy-one children having definite organic heart disease, without symptoms of insufficiency, 69 percent had a normal tolerance for standardized test exercises, 29 percent had a fair tolerance, and 2 percent had a poor tolerance. In children with chronic organic heart disease, exercise tolerance tests give important and useful information which may be utilized as a scientific basis for intelligent regulation of the child's activities. The observations resulting from this investigation would seem to indicate that the fear of exercise is unwarranted, and that a wider latitude may be permitted with safety.

EFFECT OF PROHIBITION ON INCIDENCE OF PORTAL CIRRHOSIS

A study was made by Joseph L. Miller, Chicago (*Journal A. M. A.*, June 11, 1921), of a number of patients with cirrhosis entering the Cook County Hospital from 1910 to 1920, inclusive. Attention was attracted to the subject by the almost complete disappearance of cirrhosis during the last year in the wards of this institution. The histories of the nineteen patients entering during 1920 were reviewed with the hope of determining whether these patients had been able to secure alcohol after July 1, 1919. All but one gave a history of chronic alcoholism, but no mention was made of whether they had been able to obtain liquor after July 1, 1919. This question must therefore remain undetermined. From these figures there can be little doubt that portal cirrhosis, in this country, at least, is associated largely and possibly entirely with the use of alcohol. The very sudden drop in the incidence of cirrhosis (1917: 156 cases; 1919: 48 cases; 1920: 19 cases) following prohibition suggests that progression of the process in the liver ceases when alcohol is discontinued. With few exceptions the diagnosis of portal cirrhosis when made at the Cook County Hospital indicates very advanced cases with ascites, and cirrhosis in this stage has almost disappeared.

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EDITORIALS

**CLIMATE IN THE TREATMENT OF
TUBERCULOSIS**

In a recently published book on Pulmonary Tuberculosis (Otis) the uses of climate in treatment are discussed in such a comprehensive and intelligent manner as to merit thoughtful consideration on the part of all those who are tuberculosis workers.

The climate of any locality is its average weather condition, and that includes temperature, humidity, wind, sunshine and the amount of moisture through rain or snow. In speaking of climate we mean the aggregate of these weather conditions, extending over a long period, and in estimating the climate of any region we must know the average range of these various climatic elements. Formerly it was considered that climate was an essential factor in the treatment of tuberculosis, and accordingly it was customary to select those localities for tuberculosis patients in which the climatic conditions seemed to be most favorable. However, the open air treatment can be carried out anywhere, even in the crowded city, for more depends upon the method, the careful attention to details, the skilled medical supervision, and the complete fulfillment of the outdoor life than upon any special climate. Nevertheless, favorable climatic conditions are an added advantage, for the purer the air and the more favorable the other climatic conditions, the more perfectly the open air treatment can be effected.

The essential favorable climatic conditions for pulmonary tuberculosis are: first, pure air free from bacterial impurities and dust; second, the maximum amount of sunshine; third, the absence of or protection from high winds; fourth, moderate dryness and more or less equability; fifth, a medium or cool average temperature.

A well known writer on tuberculosis says "the idea of climate for the average pulmonary patient in the earlier and more hopeful stages of the disease is the one where extremes of temperatures are not great, with the purest atmosphere, little humidity, much sunshine and where all conditions permit the patient to live comfortably out of doors the largest number of days

out of the year and the largest number of hours out of the twenty-four." Concerning this matter Otis says that favorable climate permits one to pursue the open air life more completely and comfortably, and increases the general invigoration of vital processes. It often favorably influences the mental attitude, as one is more cheerful and hopeful in pleasant weather and under sunny skies, and, lastly, complications such as peritonitis, laryngitis, pleurisy, etc., are less likely to occur in favorable climate.

It must be borne in mind that favorable climate is only a part of the general treatment and that not the most important one. Proper hygiene, diet, discipline, and skilled medical supervision must never be omitted. In deciding upon the change of climate it is of the utmost importance to consider the temperament of the patient, the social conditions, financial standing, and the instances of complicating diseases which might act as contrary indications. Those cases that are most suitable for and most likely to be benefited by a change of climate are: first, early cases; second, advanced cases of the quiescent state, with no serious constitutional disturbances; third, advanced cases with little general disturbance and a moderate degree of resistance; fourth, cases of cavities, if not extensive and in which the disease is quiescent; fifth, cases more or less advanced in which softening and excavation are going on accompanied by much cough and expectoration. Otis believes that the first two classes do well in the elevated regions; the third class of cases are better where there is little or no elevation, such as the pine belt of the South; the fourth may be sent to the lowland regions; the fifth may have life prolonged and live more comfortably in a moderately warm, dry region, such as the southern pine belt or southern California. When complicated with other diseases, the patient must be individually considered.

As Otis well says, not all cases are suitable to send away at all, and this is always the first consideration to be settled when a change is under discussion. Rarely should a patient be sent away who is suffering from acute symptoms, nor should the far advanced, hopeless cases be sent away only to die far away from home. Others of little persistence and self control, and who cannot be depended upon to carry out the plan of treatment, if sent away at all, should be sent to a sanitarium where they can be under a plan of discipline.

Finally, the advantages and limitations of climate in the treatment of tuberculosis are as follows: "A special or truly immune climate does not exist. The value of climate depends upon how perfectly it can aid in the production of improved nutrition, and the restriction of all

functions to a normal physiological standard working into the body and mind to accomplish this. Tuberculosis can be cured in every climate where extremes do not exist. The individual condition of the patient alone allows the choice. To accomplish a cure the plan of treatment and the method of life the patient follows hold the first consideration."

THE ANTI-BEER BILL

In all probability most of the people have an idea that the Volstead Anti-beer Bill, now before Congress, is innocent enough, and we confess that we too have been somewhat deluded, at least to the extent of defending the assertion that the manufacture and sale of beer should not be permitted on the ground that beer has any medicinal value. However, the Volstead Anti-beer Bill, like many other bills that appear so innocent on the surface, contains a "stinger" which should be eliminated before the bill is passed, and we refer to that feature of the bill which prevents or hampers chemical or manufacturing industries from using alcohol. Many industries will be affected if the bill in its present form is passed, and it is hoped that the protest of the American Chemical Society and other interests will have some weight.

THE CROOKEDNESS OF THE ANTI-VIVISECTIONISTS

The anti-vivisectionists, like the anti-vaccinationists, always have resorted to a species of crookedness and sometimes open dishonesty in order to win converts. Facts are distorted, and the most specious arguments put forth in order to make it appear that animal experimentation is cruel, inhuman and unworthy of tolerance under any conditions. A late piece of deceptive literature emanating from the anti-vivisectionists is a garbled quotation from an address given by Dr. William J. Mayo before the Boston Surgical Association. The anti-vivisectionists publicly announce that Dr. Mayo advocates "that dogs be protected from vivisection or from being used for experimental purposes". This statement is based on a garbled quotation from Dr. Mayo's address, in which he said that the dog must be protected from wanton experimenters. What Dr. Mayo did say was as follows: "Animal experimentation has become one of the foundation stones of progress and has resulted in gifts of inestimable value to humanity. The activities of anti-vivisectionists seriously threaten the continuance of these investigations which are of such paramount importance to the nation's health. It is undoubtedly true that opposition to animal experimentation has been brought about by physicians themselves. * * *

The medical profession has been derelict in permitting untrained men to do unnecessary animal experimentation without supervision, work which was of little or no value. By pursuing a policy of honesty and faithfulness to a trust, animal experimentation can be carried on without objection. If it is the wish of the medical profession to continue this work it must not furnish a market for the thief, and it must protect the dog from the wanton experimenter."

This statement of Dr. Mayo is the one that has been garbled and distorted for the purpose of making it appear that Dr. Mayo is opposed to vivisection. Could anything be more dishonest or contemptible? But what more could be expected from a lot of fanatics?

EDITORIAL NOTES

THE A. M. A. has appointed a committee to survey the entire subject of vaccination and to prepare suitable material for educating the public on this question. This action has been found necessary in view of the recurring anti-vaccination agitation.

IN view of the multiplication and activities of the various cults and sects, a committee has been appointed by the American Medical Association to study the entire question of sects in medicine and to determine the proper attitude which the American Medical Association should adopt regarding them.

THE next session of the A. M. A. is to be held in St. Louis, one of the hottest places in the summer. Let us hope that an early date is selected, for if the usual June date is selected it is almost a certainty that those who attend the session will swelter and lose all semblance of religion in damning St. Louis.

FOR the most part the Fourth of July all over the country was a safe and sane holiday. Young America seems satisfied to spend the Fourth of July in some other pastime than blowing off fingers and burning out eyes with gun powder. Doctors fail to reap any harvest as a result of this changed policy, but it is a safe bet that no doctor is sorry to lose the patronage that comes from injury due to the unsafe use of gun powder on the Fourth of July.

It is well established that properly conducted wards or hospitals for the tuberculous constitute no source of contagion even in thickly settled communities, and to assuage the public fears on this question the A. M. A. at the Boston Session recommended that general hospitals in all parts of the United States should provide separate wards or separate rooms for the care of pulmonary tuberculosis patients and that such

patients be never denied admission, at least in emergency, because of the character of the disease from which they are suffering.

THE A. M. A. very justly put itself on record as opposed to the practice of some members of the medical profession in aiding in booze distribution. The matter was acted upon by the presentation of a resolution as follows:

WHEREAS, Reproach has been brought upon the medical profession by some of its members who have misused the law which permits the prescribing of alcohol, therefore, be it

RESOLVED, That the American Medical Association now expresses its disapproval of the acceptance by a small minority of the profession of the position of being purveyors of alcoholic beverages.

It looks very much as though the medical profession is digging its own grave. What else can we think when we find prominent members of the medical profession advocating Compulsory Health Insurance, Health Centers, and Free Hospitals under State or Federal control where medical and surgical treatment may be secured by anyone without money or without price, also venereal clinics, free or nearly so, and many other proposed medical uplift schemes, all tending to undermine the physician in private practice and eventually drive him out of business. It is about time to separate the sheep from the goats and know where we stand on this proposition of making the practice of medicine another one of those state functions which fail to functionate in the sense of giving something that is worth while.

THE Muncie Academy of Medicine (Muncie, Indiana) has been putting on a program at the weekly meetings which is deserving of high commendation. The meetings are held on Friday evening of each week, preceded by dinner at a local hotel. During the past couple of months such men as Dr. Joseph Rilus Eastman, Indianapolis; Dr. P. E. McCown, Indianapolis; Dr. Joseph E. Beck, of Chicago; Dr. Joseph Colt Bloodgood, of Baltimore; and Dr. George W. Crile, of Cleveland, have been the guests of the society and delivered addresses on interesting subjects.

The plans of the Academy for the future include some special meetings on hospital standardization, public health problems and the discussion of subjects of interest to lay minds, to which the public is to be invited. The members believe this plan to be the most effectual in fighting the various pseudo medical cults.

WE dislike to think it, and yet developments at the Boston session of the A. M. A. indicate that we shall be obliged to fight public health officers, as a class, in connection with the attempt to force Compulsory Health Insurance and State Medicine upon us. Some of the health officers in attendance at the Boston session admitted that they were for State Medicine, and that it was perfectly natural for health officers to support it as it meant a continuance of the official positions and salaries connected therewith. In view of the fact that in a large measure health officers owe their positions to the influence of the medical profession, it seems to us that they should be in better business than trying to foist State Medicine upon us. It is time for a "show down" on this question of State Medicine, and the sooner we find out who our friends are the better it will be for us and the more intelligently we can act.

THE Associated Anesthetists are asking for contributions for the purchase of a bronze bust of Dr. William T. G. Morton to be placed in the niche assigned him by the electors in the Hall of Fame. The election of Dr. Morton to the Hall of Fame has brought a signal honor to the allied professions of medicine and dentistry. The Associated Anesthetists, in session in Boston during A. M. A. week, voted unanimously for the privilege of placing this bust, and plan to have it ready for placement on Oct. 16 in celebration of the Diamond Jubilee Anniversary of Morton's first public demonstration of ether anesthesia. The Associated Anesthetists as well as other prominent leaders of the allied professions are urging all those interested to make substantial contributions for this purpose. Check should be sent to F. H. McMechan, M.D., Secretary-treasurer, Associated Anesthetists, Lake Shore Road, Avon Lake, Ohio.

DR. FRANK B. WYNN, of Indianapolis, has been chosen vice-president of the American Medical Association. This is a very deserving honor to one of the best known medical men in the United States and one who has done much for the American Medical Association. It was Dr. Wynn who established the scientific demonstration and exhibits before the A. M. A. after he had made such an unqualified success of a similar enterprise in our own Indiana State Medical Association. Now that the A. M. A. has but one vice-president, an honor such as has been bestowed upon Dr. Wynn carries with it more distinction than was accorded the first vice-president several years ago when it was the rule to have a long list of vice-presidents. The only regret that we Indianians have is that Dr. Wynn was not made president, an honor

which we hope will fall to him a little later, as there is no one in the Association who is more deserving.

At the Boston session of the A. M. A. Dr. J. F. Rooney of New York presented before the House of Delegates the following resolution: "Resolved, That the American Medical Association defines 'State Medicine' to be any method providing for the practice of medicine under the direction, subsidy or control of the state or national government, excepting those functions having to do with preventive medicine and public health which do not involve the treatment of disease except that which is communicable." This resolution was referred to the Reference Committee on Legislation and Public Relations and, as might be expected, was given scant consideration as a direct result of the influence of the public health officials. To quote a well known slogan "There's a Reason." The rejection of this resolution was not because it did not hit the nail on the head and define state medicine as it should be defined. However, the time is coming when the medical profession as a whole will be obliged to throw out its false leaders.

DR. JAMES H. STYGALL, medical director of the Indiana Tuberculosis Association, assumed his duties on April 13 and on April 15 began holding clinics. In the fifteen days following, clinics were held in Rush, Noble, Dekalb, Boone and Miami counties. At these six clinics 95 patients were examined, 24 of whom were found to have active tuberculosis, 10 were inactive cases, 14 had tuberculous adenitis, and 14 were declared suspicious. The physicians in these counties have shown a keen interest in the developments of the clinics, and a total of 57 medical men were in attendance, giving an average of ten physicians to a clinic. The success of these clinics is very gratifying to the Association and we believe that in finding the early cases the state and local associations are getting down to the crux of the tuberculosis problem. In locating cases that have never been discovered before, and in seeing that these patients are given treatment at the proper time in the proper way and in the proper place, the spread of tuberculosis is being counteracted and the whole problem is being approached in a manner that will count for much in the control of tuberculosis.

DR. ERIC CRULL, Fort Wayne, President of the Indiana Tuberculosis Association and superintendent of the Irene Byron Tuberculosis Sanitarium, read a paper before the annual session of the Indiana Tuberculosis Association on "Finding the Early Cases". The conclusions

drawn in the paper are that to successfully wage the fight on tuberculosis we must have: first, the full and intelligent cooperation and support of the public; second, to get that cooperation and support we must impress upon the public the importance of this work and convince it that tuberculosis can be rooted out of the community, and that elimination would, aside from humanitarian reasons, be the greatest economic feat that can be accomplished; third, to impress thoroughly upon the community the great prevalence of the disease, public clinics held throughout the state would be very potent factors; fourth, to impress on all tuberculosis workers that the prevention of tuberculosis is more of a general health problem than a narrow fight against this one infection; fifth, to convince the public of the great possibilities of this work, numbers of cases must be restored to their families, and to their employers, and be able to resume their civic duties and help bear the burdens of the community, and, sixth, to be able to so restore them, *we must find our cases early.*

IN London they are discussing the danger of athletics for girls. Opinion seems to be divided. One noted school authority says that in spite of the fact that some women develop into physical experts, few of them do not at some time have a more or less serious breakdown. The health of the athletic woman is often more apparent than real. It is further argued that girls who engage in strenuous games often acquire hard muscles, flat chests, and often have a hard, aggressive manner. They frequently suffer from nervous heart trouble, some from rheumatism or displacement of some kind, and sometimes menstruation stops for long periods. They do not seem able to meet unaccustomed strains. Their marriages are often childless. Their children are physically inferior to those of women who have not engaged so much in athletics. On the other hand, some of the well known educators, backed by medical officers and physical directors, disagree with these views. They contend that where occasionally physical exercise or athletics for women is overdone, like everything else, yet in the main nothing but good comes from it, and that there is no reason for opposition to gymnastic exercises and outdoor athletics for girls if properly conducted, and they always are conducted in a well regulated girls' school or in colleges where girls are admitted.

SPEAKING of regulating everybody and everything, which seems to be the popular movement today, we hear nothing about regulating the practice of the legal profession. Of course it is all right to put the doctor out of business,

and make the practice of medicine a state function, as also to fix the amount of his compensation, but you never hear anything about regulating the practice of lawyers or fixing their fees. The attorney in the Stillman divorce case can be awarded a hundred thousand dollar fee, and, as long as the client can pay it, no objection is raised; but if some doctor charged a quarter of that amount for saving the life of one of the Stillmans, the courts and no doubt the public would put up a howl that would be heard from one end of the earth to the other. It is quite true that much of this objection to fees for medical services arises through criticism on the part of doctors who, through a spirit of jealousy or competitive antagonism, are ever ready to place a low pecuniary estimate upon the services of anyone but themselves. In other words, doctors signally fail to stick together and uphold one another, but you never hear of any clash among lawyers, especially when it concerns a question of remuneration. It would be well for us to copy the example of the trades and professions, at least having a semblance of support of those practices and those measures known to be of vital interest to the medical profession.

THE Labor Convention at Denver tried to place the stamp of approval on State Medicine, or, in other words, the rendering by the state of gratuitous medical and surgical services to the laboring man. It failed, as also the movement to secure Compulsory Health Insurance, Old Age Insurance and Non-employment Insurance. Likewise an effort to approve six hours as a legal working day but with eight hours of pay also failed. These movements but show the trend of opinion among laboring men, and indicates a widespread belief in the theory that the laboring man should receive something for nothing. Some of us would have more sympathy for the laboring men if they would carry into effect the practice of delivering eight hours' honest work for eight hours of pay. Today we are suffering not so much from the effects of high wages or, for that matter, what most people term war time or profiteering wages, as we are from the tendency on the part of the average working man to shirk or do as little as he can in order to hold his job and draw his pay. The whole attitude of Unionism seems to be to cut down individual effort and individual output while at the same time demanding an increasing compensation. Such an attitude must change and whenever the unions start out with the idea of delivering labor and cease to stifle individual effort and incentive, the question of compensation will be one that will be easily settled.

As a matter of fact it is about time that regulating everything pertaining to the conduct of the American people should take a rest. We have had enough regulating to last us for the next hundred years, and some of the vicious legislation and its by-products, due to the efforts of the uplifters and faddists, either will have to be wiped off the statute books or ignored if we are to have any peace in our daily lives. The trouble of it is a lot of legislation which looks innocent enough when it is proposed, either is found to contain a "stinger", or is but an entering wedge for something that is positively vicious. As an instance of this we have but to cite the Sheperd-Towner bill which, thanks to the efforts of the rational-minded in the medical profession, seems doomed to defeat, and the various compulsory health insurance bills. Lastly, we have the bills which will serve as amendments to the Volstead Act, or perhaps we might say, adding stringent regulations to the Act, under the terms of which alcohol in any form would not be used in the arts and sciences. There is an old saying that if you give a calf enough rope he will hang himself, and it is hoped that a lot of these wild-eyed reformers who are trying to regulate everything under the sun, will hang themselves through their over-activities. There will come a time when the American people will rebel against the idiotic and inconsistent restrictions proposed by the fanatical reformer.

As an example of the idiotic inconsistency of some of our governmental regulations we can point with pride (?) to the ruling of the Internal Revenue Department to the effect that narcotic inventories, under the Harrison Anti-narcotic Law, covering the period from January 1 to June 30, inclusive, must be in the Internal Revenue office on July 1 or a penalty will be assessed. A doctor residing in South Bend or Evansville will have a sweet time getting his opium inventory into the Internal Revenue office at Indianapolis on July first if he carries the report up to and including the thirtieth of June. Even admitting prompt mail service, and "there ain't no such animal" any more, a report mailed in Evansville, South Bend or Fort Wayne at midnight of June 30 would not reach Indianapolis on July 1. Last year the editor of THE JOURNAL reported on a few hypodermic morphine tablets and the usual amount of cocaine used in local anesthetic work, but in reporting up to and including June 30 his report reached Indianapolis about July 2 or 3, and he was penalized very promptly for failure to get the report in on July 1. No explanation was offered to the inquiry as to how a report covering the period up to and

including June 30 could be gotten to the Indianapolis office within the few hours allowed. We hear that there are others who have had a similar experience. We are not bolshevists, but we would like to see a little common sense pounded into the heads of those who are elected or appointed to serve the American people.

DEATHS

JOHN H. SENEFF, M.D., died May 23 at his home in French Lick, aged 66 years.

SAMUEL B. RUBY, M.D., died on May 16 at his home in Union City, aged 66 years.

SHELBY WRIGHT, M.D., North Manchester, died May 21, at the age of sixty-three years. Dr. Wright graduated from the Louisville Medical College, Louisville, Kentucky, in 1882.

JOHN S. INKS, M.D., of Nappanee, died June 9 at the home of his daughter in Wakarusa. Dr. Inks was born in 1848, graduated in medicine from the University of Illinois College of Medicine, Chicago, in 1884 and had practiced in Elkhart county for thirty-eight years. He was the father of Dr. Charles A. Inks, also of Nappanee. Dr. Inks was a member of the Elkhart County Medical Society and the Indiana State Medical Association.

ELIJAH V. GREEN, M.D., Martinsville, died suddenly on June 9 from acute indigestion. Dr. Green was born in Shelbyville, Indiana, in 1849, graduated from the Indiana Medical College in 1876, and had practiced in Martinsville almost continuously since that date, at the time of his death being manager of the Barnard Sanatorium in that city. Dr. Green was a member of the Morgan County Medical Society and the Indiana State Medical Association.

GEORGE W. MILLER, M.D., died May 12 at the Wesley Hospital, Chicago, as a result of a malignant growth. Dr. Miller was born in Middleburg, New York, in 1877, received his preparatory education at Poultney Academy and graduated in medicine from Miami Medical College, Cincinnati, in 1901. He had practiced medicine in East Chicago for the past twelve years. He was a member of the Lake County Medical Society and the Indiana State Medical Association.

NELSON C. HARROD, M.D., of Tampico, was instantly killed on May 30 when the automobile which he was driving was struck by a Pennsylvania passenger train. Dr. Harrod was born in 1880, graduated in medicine from Kentucky University, Medical Department, in 1904 and

had practiced medicine in Tampico since the time of his graduation. He was a member of the Indiana State Medical Association. Mrs. Harrod and one daughter died a few days later as a result of the same accident.

JOHN L. DURHAM, M.D., Graysville, died June 14, aged seventy-six years. Dr. Durham was born in Kentucky in 1884. He was reared in Montgomery County, Indiana, and received his early education in the county schools and at the Waveland Academy. He graduated in medicine from the University of Louisville, Medical Department, Louisville, Kentucky, in 1880. He had practiced medicine in Graysville since 1881. Dr. Durham was a member of the Sullivan County Medical Society and the Indiana State Medical Association.

JOHN W. HOUSE, M.D., Indianapolis, died June 21 in the Methodist Hospital following an operation. Dr. House was born in Lawrenceburg, Indiana, in 1860. He graduated from Valparaiso University and studied medicine at Miami Medical College, Cincinnati, from which he graduated in 1886. He began the practice of medicine at Manchester, Indiana, later going to Lawrenceburg, and locating in Indianapolis in 1904. He was an active member of the Indianapolis Medical Society, the Indiana State Medical Association and the American Medical Association.

GEORGE F. BUTLER, M.D., a former resident of Attica, Indiana, where he was medical adviser at Mudlavia, died June 22 enroute to Chicago from Boston where he had been attending the annual session of the American Medical Association. Dr. Butler was born in 1857 and received his medical degree from Rush Medical College in 1889. Since leaving Mudlavia in 1918 he had served as medical director of the North Shore Hospital in Winnetka, Illinois. He was a member of the Indiana State Medical Association and the American Medical Association.

CHARLES W. MCINTYRE, SR., M.D., died June 6 at his home in New Albany, aged eighty-one years. Dr. McIntyre was born in Ireland, came to America in his boyhood and was reared in Canada. He was a graduate of MacGill University in Canada and graduated in medicine from the University of Louisville, Louisville, Kentucky, in 1883. He had practiced medicine in New Albany for forty-one years and during that time served for many years as secretary of the County Board of Health and later County Health Commissioner. He was a member of the Floyd County Medical Society and the Indiana State Medical Association.

WILLIAM FLOYD JULIEN, M.D., Gary, died in the Mercy Hospital, June 11, from pneumonia. Dr. Julien was born in 1875 at Delphi, Indiana, where he attended the public schools. He later graduated from Purdue University and, in medicine, from Rush Medical College in 1900. The practice of medicine was begun in the state of Illinois. He later removed to Colorado because of ill health, then located in Gary approximately ten years ago where he was engaged in the practice of ophthalmology and otolaryngology. He was a member of the Lake County Medical Society, the Indiana State Medical Association and the American Medical Association.

FREDERICK A. TUCKER, M.D., of Noblesville, died June 6, from heart trouble following an appendectomy. Dr. Tucker was born in Hamilton County in 1873. His early education was received at the county schools, and he graduated from the Rush Medical College in 1897, locating at Noblesville immediately thereafter, where he has continued to reside and practice to the time of his death. Dr. Tucker was the third physician in Indiana to obtain a commission in the Medical Corps after the United States entered the World War. He was commissioned in June, 1917, and rose rapidly from the rank of first lieutenant to lieutenant colonel. He was first stationed at Fort Benjamin Harrison, later at Camp Oglethorpe and later in charge of a hospital at Macon, Georgia. In the spring of 1918 he sailed for France where he had charge of a base hospital near Toul until the armistice was signed. Dr. Tucker was an active and influential member of the Hamilton County Medical Society and the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

DR. T. E. BRUCE has removed from East Chicago to Clinton for the practice of medicine.

THE annual picnic of the DeKalb County Medical Society was held at Hamilton Lake on June 16.

DR. S. D. HATFIELD, late of Jaeger, West Virginia, has located at Kokomo for the special practice of pediatrics.

DR. WILLIAM H. BUTLER, of Columbus, has retired from active practice after forty-eight years of continuous service.

GRADUATING exercises of the Mercy Hospital Training School at Gary were held on June 6. Eleven nurses received diplomas.

THE members of the Noble County Medical Society were the guests of Dr. J. E. Luckey at his Wolf Lake home on June 21.

DR. FRANCIS M. WILLIAMS, of Anderson, expects to sail from San Francisco about August 1, for medical missionary work in China and Japan.

DR. ROBERT V. HOFFMAN, of Hagerstown, has removed to South Bend where he will fill the chair of internal medicine with the South Bend Clinic.

DR. MYRON HARDING, recently graduated from the Indiana University School of Medicine, has opened offices in West Newton for the practice of medicine.

SIXTY-ONE nurses received diplomas at the graduating exercises of the Methodist Episcopal Hospital Training School for Nurses of Indianapolis, on June 8.

DR. J. ROY BURLINGTON, of Attica, has been appointed local surgeon for the Wabash and C. & E. I. Railroads. He succeeds Dr. A. M. Sullivan, recently resigned.

DR. A. M. SULLIVAN, of Attica, is taking a six months' postgraduate course in surgery, gynecology and urology in the New York Postgraduate School and Hospital.

A RECENT report by the Marion County Tuberculosis Association shows seventy-two public health meetings held under the auspices of the organization with an attendance of 12,777 persons.

DR. JOHN H. GILPIN, of Fort Wayne, has been appointed physician for ex-service men in his district, assuming his duties on June 1. Dr. Gilpin succeeds Dr. M. B. Catlett, who resigned recently.

THE practice and complete office equipment of the late Dr. W. F. Julien of Gary has been purchased by Dr. Harry C. Parker of Chicago. Dr. Parker is a graduate of the medical school of the Northwestern University.

S. P. HOFFMAN, M.D., associate medical director for the Lincoln National Life Insurance Company of Fort Wayne, left on June 1 for the East where he expects to take postgraduate courses in New York and Boston.

ERIC A. CRULL, M.D., superintendent of the Irene Byron Hospital, Fort Wayne, recently attended the meeting of the National Tuberculosis Association in New York and also a meeting of the American Sanitarium Association.

THE members of the Adams County Medical Society entertained the physicians of Bluffton, Indiana, and Van Wert, Ohio, on June 15. A banquet preceded the scientific program. Dr. Mann, of the Mayo Institute, Rochester, Minnesota, presented the leading paper of the evening.

THE annual banquet of the Cass County Medical Society was held June 3 at Logansport. Three pioneer physicians of the county, Drs. Nelson W. Cady, physician at the Longcliffe Hospital; C. L. Thomas, of Logansport, and L. L. Quick, of New Waverly, were honor guests.

ACCORDING to recent announcement, the United States Pharmacopœia is being translated into the Chinese language. As a result of this work, and the adoption of standard formulas for drugs and medicines, it is probable that American drug manufacturers will benefit greatly.

AT the recent annual convention of the National Tuberculosis Association Dr. James Alexander Miller of New York was elected president, President Harding was elected honorary vice-president, Dr. George M. Kober of Washington, secretary, and Henry B. Platt of New York, treasurer.

THE plans and specifications for the new Wayne County Tuberculosis Hospital have been approved by Thomas B. Kidner, expert on hospital construction for the National Tuberculosis Association, and work on the institution has been started. The hospital is to be located six miles south of Richmond.

ACCORDING to announcement, the Saint Elizabeth Hospital at Lafayette is to be enlarged by the addition of a new north wing with a capacity of one hundred beds, the erection of a nurses' home, a nurses' training school building and a stable and garage. The improvements will cost approximately four hundred thousand dollars.

OUT of 211 applicants who took the recent examination for registered nurses' license held by the Indiana State Board of Registration and Examination of Nurses, 208 received passing grades. The highest record was made by Hazel R. Bosler of the Fletcher's Sanatorium of Indianapolis, who made an average grade of 94.6 percent.

DR. ARTHUR E. GUEDEL of Indianapolis was elected president of the Interstate Association of Anesthetists at its recent meeting in Niagara Falls, New York. Dr. Guedel has been in Minneapolis for the past few months doing research work in anesthesia and conducting a postgraduate school in connection with the Minneapolis General Hospital. He returned to Indianapolis July 1st to resume practice.

THE Randolph County Medical Society entertained the Starke County Medical Society together with visitors from Muncie, Hartford City and Indianapolis, on June 13. One hundred twenty-five doctors and their wives were present. Dr. George S. Bond of Indianapolis presented a paper on "The Heart and Its Diseases"; and Dr. J. M. McDowell of Cleveland spoke on "The Activities of the Red Cross in Peace Times."

THE Vanderbilt Medical School at Nashville, Tennessee, is the recipient of a donation of three million dollars, half from the General Education Board and half from the Carnegie Corporation of New York, the sum to be available upon the removal of the school of medicine from its present site to a location on the west campus and upon the completion of a proper building program. They aim to have the new plant ready for operation by the fall of 1924.

ACCORDING to the Associated Press the University of Georgia has taken action officially recognizing Dr. William Long as the discoverer of anesthesia. Although Dr. William Thomas Green Morton of Massachusetts has been elected to the Hall of Fame in New York as the discoverer of anesthesia, the Georgia University declare that they have evidence that Dr. Long first used ether for a surgical operation on March 30, 1842, which they claim is four years prior to the use of ether by anyone else.

THE annual meeting of the Fourth District Medical Society was held at Seymour, May 25, under the direction of Dr. D. W. Weaver, Greensburg, president. The scientific program was as follows:

"Septicemia and Resulting Diseases," by Dr. W. H. Stemm of North Vernon; "Thyrototoxicosis", Dr. C. E. Gillespie of Seymour; "Management of Labor," Dr. C. A. Gibson, Batesville; "Surgical Disturbances of Digestion," Dr. W. D. Haines, of Cincinnati, and "Diagnosis", by Dr. L. L. Solomon, Louisville, Ky.

DURING June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial

Remedies: The Abbott Laboratories: Saligenin. Armour & Co.: Suprarenalin Base, Suprarenalin Ointment. E. Bilhuber, Santyl Capsules. The Calco Chemical Co.: Amidopyrine-Calco. Hynson, Westcott & Dunning: Tablets Mercurochrome 220—Soluble. H. A. Metz Laboratories: Orthoform. Winthrop Chemical Co.: Mesotan. Nonproprietary Articles: Amidopyrine.

DEDICATION services of the new buildings of the Peking University Medical College, erected by the China Medical Board of the Rockefeller Foundation, will be held the week of September 15-22 and will include an international medical conference to which scientists from America and European countries, as well as the Far East, have been invited. Dr. Henry S. Houghton will be inaugurated as director of the college during this week. The college, which is situated in the capital of the Chinese Republic, had its beginning in an earlier institution—the University Medical College—founded in 1906 by the joint efforts of six British and American missionary societies. In 1916 the property of this school was transferred to the China Medical Board of the Rockefeller Foundation which has purchased additional land and erected, in an interesting adaptation of classic Chinese architecture, a series of hospital and laboratory buildings. The institution comprises not only the medical school but also a two hundred and fifty bed hospital, outpatient clinics, a training school for nurses and a pre-medical school.

THE following Indiana doctors registered at the Boston session of the American Medical Association: Charles G. Beall, Fort Wayne; Charles R. Bird, Greensburg; Claude S. Black, Warren; H. W. Bowers, Akron; Albert E. Bulson, Jr., Fort Wayne; Eugene L. Bulson, Fort Wayne; John W. Carmack, Indianapolis; Ralph S. Chappell, Indianapolis; Fred R. Clapp, South Bend; Prosser E. Clark, Clarksburg; Stanley A. Clark, South Bend; Eldo H. Clauser, Muncie; Charles N. Combs, Terre Haute; Earl Conover, Evansville; Geo V. Cring, Portland; Frank S. Crockett, Lafayette; Edgar C. Denny, Milton; John E. Doerr, Mt. Vernon; D. E. Douglas, Greensburg; James A. Duggan, South Bend; Joseph R. Eastman, Indianapolis; J. H. Eberwein, Indianapolis; G. G. Eckhart, Marion; Bernhard Erdman, Indianapolis; L. H. Eshleman, Marion; William O. Gossett, Brookston; A. B. Graham, Indianapolis; Chas. C. Grandy, Fort Wayne; Wallace S. Grayston, Huntington; Murray N. Hadley, Indianapolis; Leopold Hermann, Evansville; W. H. Hillman, South Bend; Thomas C. Hood, Indianapolis; C. Norman Howard, Warsaw; M.

F. Hunn, Shipshewana; Marie B. Kast, Indianapolis; Delbert Kearby, Indianapolis; Walter F. Kelly, Indianapolis; W. H. Kennedy, Indianapolis; E. H. Kruse, Fort Wayne; C. E. Laughlin, Evansville; E. O. Lindenmuth, Indianapolis; Carl H. McCaskey, Indianapolis; Geo. W. McCaskey, Fort Wayne; P. E. McGowan, Indianapolis; H. L. Magennis, Indianapolis; F. A. Malmstone, Griffith; Judson D. Moschelle, Indianapolis; Herman G. Morgan, Indianapolis; Arvine E. Mozingo, Indianapolis; C. F. Neu, Indianapolis; Miles F. Porter, Fort Wayne; Miles F. Porter, Jr., Fort Wayne; M. Ravdin, Evansville; J. W. Ricketts, Indianapolis; O. H. Ries, Knightstown; David Ross, Indianapolis; Louis F. Ross, Richmond; Leslie Sammons, Shelbyville; I. M. Sanders, Greensburg; Charles E. Savery, South Bend; Walter N. Sharp, Indianapolis; J. E. Showalter, Waterloo; James M. Smith, Indianapolis; Orville E. Spurgeon, Muncie; Walter A. Stauffer, Elkhart; Budd Van Sweringen, Fort Wayne; G. W. Thompson, Winamac; F. M. Webb, Jeffersonville; F. E. Wiedmann, Terre Haute; E. N. Wood, Columbus; Homer Woolery, Bloomington; C. C. Du Bois, Warsaw; C. C. Collins, Roachdale; Harvey S. Cook, Valparaiso; Frank W. Cregor, Indianapolis; Chas. H. Emery, Bedford; Edw. D. Freeman, Osgood; H. G. Homer, Indianapolis; Grace Line Homman, La Porte; J. N. Hurty, Indianapolis; George F. Keiper, Lafayette; G. W. Kohlstaedt, Indianapolis; Maurice H. Krebs, Huntington; Geo. D. Marshall, Kokomo; J. H. Wm. Meyer, La Porte; H. O. Shafer, Rochester; Harry Williamson, Marion; Hugh J. White, Hammond; H. R. Allen, Indianapolis; E. M. Amos, Indianapolis; E. R. Borley, South Bend; William T. Clevenger, Indianapolis; Chas. E. Gillespie, Seymour; Jas. A. Craig, Greenwood; Albert T. Davis, Marion; Harry Elliott, Brazil; F. W. Foxworthy, Indianapolis; C. J. McIntyre, Indianapolis; Urbana Spink, Indianapolis; Frank B. Wynn, Indianapolis; Charles P. Emerson, Indianapolis; Arthur L. Mikesell, Fort Wayne; Lafayette Page, Indianapolis.

Within the last year the danger to railway travelers of infection from typhoid fever, dysentery and other water-borne diseases has been reduced to a minimum in most parts of the country through the cooperation of the U. S. Public Health Service with the different state boards of health. Nearly all supplies used on trains for drinking or cooking have been tested by Service engineers and found to be safe, and will be reinspected periodically.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Gravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8

MUNCIE ACADEMY OF MEDICINE

June 17, 1921

On Friday, June 17, 1921, the Muncie Academy of Medicine met for their weekly dinner meeting at the Hotel Roberts.

The speaker of the evening was Dr. Joseph E. Beck of Chicago, who gave a most interesting and instructive talk, his subject being "A Diagnosis of Ear, Nose, and Throat Complications Before Their Arrival." He stated that his subject could very well be called "Anticipation Diagnosis." He laid much emphasis on the fact that it was imperative for the doctor to recall all possibilities of complication and then to observe the patient often and examine him carefully to make sure that there are no complications arising. He spoke of sinusitis, mastoiditis, lateral sinus thrombosis, brain abscess, and in fact all the complications. He stated that there had been so much advancement made in the treatment of ear, nose and throat conditions in the past fifteen years that the treatment then practiced is in the main now obsolete. He pointed out the fact that oftentimes the treatment instituted is too harsh, this being especially so in sinus conditions. The treatment doing more harm than the condition present is explained by the fact that too harsh solutions are used or that the treatment is too energetic. It is absolutely necessary to remember that oftentimes a bony structure is involved and in that case the treatment as necessarily applied to the simple sinusitis is not indicated, but more energetic measures should be tried.

Dr. McCaskey of Indianapolis was the first discussant. Other doctors who brought forth a lively discussion were Drs. Hollis of Hartford City, Krebs of Huntington, Tomlin and Cammack of Indianapolis, Boyd-Snee of South Bend, Wright, Whitaker and Carey of Indianapolis, and Mix of Muncie.

Dr. Beck was elected as an honorary member of the Muncie Academy of Medicine.

Adjournment. Attendance 138.

June 24, 1921

The Muncie Academy of Medicine met for their weekly dinner meeting at the Hotel Roberts on Friday, June 24, 1921, at 6:30.

Dr. Joseph Colt Bloodgood of Baltimore, who earlier in the day had addressed the different civic organizations of the city, was the guest of the Academy and the speaker of the evening. His subject was "The Cure of Cancer Lies in the Education of the Public." He said that it was not the fear of surgery that kept cancer victims from consulting physicians, but ignorance as to the significance of the early symptoms of their present condition. Every woman over twenty-five years of age with a lump

in the breast should consult her physician at once and find out its significance. Sometimes what she regards as a lump will prove to be not a lump. If it is a lump, an immediate operation should be advised. If all lumps were removed early, ninety percent or more could be assured of ultimate cure. Every woman who has borne children runs a greater risk of cancer of the uterus than a woman who has not borne children. If she should notice anything unusual in the menstrual discharge as compared with previous periods or has a discharge between periods or after the menopause she should consult a competent gynecologist. "Every adult should know that any sensation observed in the region of the abdomen below the diaphragm which might be called "indigestion", pain, belching of gas, discomfort after eating anything, any change in the time and character of the stools, blood in the stools, nausea or vomiting should mean the immediate consultation of a physician for the purpose of a thorough examination before treatment is instituted. Such symptoms are by no means always signs of cancer of the stomach or intestines, but we know that delay is dangerous." All warts, ulcers and unhealed wounds are abnormalities which, if left alone, may change into cancer. Oral sepsis and the care of the teeth are very important to smokers, since they are more prone to develop cancer of the tongue, lips, oral cavity and mucous membrane of the mouth. X-ray examinations should be made of bones or joints when there is pain, tenderness, swelling, lump, or loss of function of an arm or leg which suggests some trouble in the bone or joint as this is the best way to recognize bone tumors. The clinical history plus a thorough physical examination and laboratory tests should make a diagnosis possible in practically all cases of cancer in any part of the body. It is up to the doctors and nurses to educate the people concerning the cancer incidence and the results of cancer in their own locality. In 1913 there were 75,000 deaths in the United States due to cancer. Due to the distribution of knowledge of cancer the number of deaths per year is decreasing.

In considering the cancer problem it is best to fear the beginning and not the end of cancer. Pain is a late symptom in external cancer, so that if an individual waits for pain, he may wait too long. The first warnings of cancer do not differ from the warnings of diseases that are not cancer, therefore the people must be educated as to what are the danger signals. Cancer never begins in a healthy spot. In external cancer the warning is always something first to be seen with the eye, or felt with the fingers. These first signs are warts, moles, little areas covered with a scab, or an unhealed wound, or there may be a little lump or nodule beneath the skin, or deeper. Pain is rarely present. It may be truthfully stated that external cancer is a disease which develops under ignorance, skepticism or procrastination, because of entirely needless fear of an operation.

Cancer of the uterus can be placed among preventable diseases. If patients would present themselves for examination on noticing a discharge of a different character and at a different time and for a longer period than normal, at this time they would not have progressed so far but that something could be done for them. The easier the diagnosis of a cancer the worse the prognosis, because at this time the disease is usually in a late and hopeless stage. Most cancers are curable if removed in the early stage and the early warnings are heeded.

The cure of cancer at the present time is not a drug, serum, ray or miracle, but simply the education of the people as to the signs of its beginning in local

lesions and the importance of an immediate examination which will lead to recognition and treatment in the most favorable stage for a cure.

Dr. Miles F. Porter of Fort Wayne discussed the paper.

Adjournment. Attendance 370.

R. H. BEESON, Secretary.

FIRST DISTRICT MEDICAL SOCIETY

The First Indiana Councilor District Medical Society held its annual meeting at the Y. M. C. A. Building, Evansville, on the 25th day of May, under the direction of Dr. A. M. Hayden, president; Dr. H. G. Weiss, secretary-treasurer, and Dr. J. Y. Welborn, councilor.

The committee on Constitution and By-Laws presented a form that they recommended, which was discussed by the physicians present and adopted as read.

The election of officers resulted in the following choice: President, Dr. Henry Nennecker; secretary-treasurer, Dr. H. G. Weiss, and councilor, Dr. J. H. Willis.

The following program of unusual interest was rendered and elicited a lively discussion: Spinal Anesthesia, Dr. J. W. Phares; Nausea and Vomiting of Pregnancy, Dr. Pierce McKenzie; Diagnostic Methods, Dr. J. Y. Welborn.

The Vanderburgh County Medical Society extended an invitation to the society to meet in Evansville as their guest in 1922. The invitation was accepted and it was decided to hold the next annual meeting at Evansville on the 25th day of May, 1922.

Adjourned.

H. G. WEISS, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

GUAIACO BENZOATE.—BENZOSOL.—The benzoic acid ester of guaiacol benzoate is slowly decomposed in the intestinal tract into benzoic acid and guaiacol, which exert their usual action. It is said to be useful in the incipient pulmonary tuberculosis, as an intestinal antiseptic and a urinary antiseptic.

GUAIACOL BENZOATE-SEYDEL.—A brand of guaiacol benzoate N. N. R. Seydel Manufacturing Co., Jersey City, N. J.—(*Jour. A. M. A.*, June 4, 1921, p. 1575).

SALIGENIN-ABBOTT.—A brand of saligenin N. N. R. For a discussion of the actions, uses and dosage of saligenin, see New and Nonofficial Remedies 1921, p. 35. Abbott Laboratories, Chicago.

SANTYL CAPSULES 7 DROPS.—Each capsule contains 7 drops of Santyl. See New and Nonofficial Remedies 1921, p. 270. E. Billhuber, Inc., New York.

SILVER SALVARSAN.—A brand of silver arsphenamine N. N. R. For a description of the actions, uses and dosage of silver arsphenamine, see *Jour. A. M. A.*, May 7, 1921, p. 1312. Silver Salvarsan is marketed in ampules containing respectively 0.05 Gm., 0.1 Gm., 0.15 Gm., 0.2 Gm., 0.25 Gm., 0.3 Gm. silver salvarsan. H. A. Metz Laboratories, New York.—(*Jour. A. M. A.*, June 11, 1921, p. 1654).

PITUGLANDOL-ROCHE.—An aqueous solution containing the active constituents of the posterior lobe of the pituitary gland of cattle, free from preservatives. It is physiologically standardized on the isolated uterus of the virgin guinea-pig so that 1 Cc. responds in activity to 0.003 Gm. betaiminazolyethylamine hydrochloride. For a discussion of the actions and uses see General Article, Pituitary Gland, New and Nonofficial Remedies 1921, p. 219. Pituglandol-Roche is marketed in ampules, each containing 1.1 Cc. Hoffmann LaRoche Chemical Works, New York.

POLLEN ANTIGENS-LEDERLE.—Liquids obtained by extracting the dried pollen of plants with a liquid consisting of 67 percent glycerine and 33 percent saturated solution of sodium chloride. For the actions and uses of pollen extract preparations, see New and Nonofficial Remedies 1921, p. 239. Pollen antigens-Lederle are supplied in 15 pollen unit strengths. They are marketed as follows: Series A, containing five vials containing, respectively, 1.5, 3, 6, 12 and 15 pollen units. Series B, five vials containing 18, 30, 45, 60 and 90 pollen units. Series C, five vials containing, respectively, 150, 225, 300, 450 and 600 pollen units. Complete Series, containing the fifteen doses of Series A, B and C. Diagnostic Test, containing 0.01 Cc. of a dilution representing 60 pollen units.

POLLEN ANTIGEN-LEDERLE (RAGWEED).—A liquid prepared by extracting the proteins from the pollen of the ragweed.

POLLEN ANTIGEN-LEDERLE (TIMOTHY).—A liquid prepared by extracting the protein from the pollen of the timothy. The Lederle Antitoxin Laboratories, New York.—(*Jour. A. M. A.*, June 18, 1921, p. 1753).

CHOLERA VACCINE (PROPHYLACTIC) - LEDERLE.—A cholera vaccine (see New and Nonofficial Remedies 1921, p. 299) marketed in packages of two 1 Cc. vials containing, respectively, 4,000 and 8,000 million killed cholera vibrios; also in packages of two 10 Cc. vials containing, respectively, 4,000 and 8,000 million killed cholera vibrios per Cc. The Lederle Antitoxin Laboratories, New York.

PLAGUE VACCINE (PROPHYLACTIC)-LEDERLE.—A plague vaccine (see New and Nonofficial Remedies 1921, p. 304) marketed in 1 Cc. vials containing 5,000 million killed plague bacilli; also in 10 Cc. vials containing 5,000 million killed plague bacilli per Cc. The Lederle Antitoxin Laboratories, New York.

ACNE MIXED VACCINE-GILLILAND.—A mixed bacterial vaccine (see New and Nonofficial Remedies 1921, p. 314) composed of *B. acni vulgaris*, *Staphylococcus albus* and *Staphylococcus aureus* in equal proportions. Marketed in packages of four 1 Cc. vials containing, respectively, 250, 500, 1,000, and 2,000 million killed bacteria; also in packages of four syringes containing, respectively, 250, 500, 1,000 and 2,000 million killed bacteria. Gilliland Laboratories, Ambler, Pa.

SUPRARENALIN.—Vials containing 1 grain suprarenalin (see *Jour. A. M. A.*, May 14, 1921, p. 1353). Armour and Co., Chicago.

SUPRARENALIN OINTMENT.—An ointment containing 0.1 percent suprarenalin (see *Jour. A. M. A.*, May 14, 1921, p. 1353), suspended in a petrolatum base. Armour and Co., Chicago (*Jour. A. M. A.*, June 25, 1921, p. 1826).

PROPAGANDA FOR REFORM

"NATIONAL IODINE SOLUTION" NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry considered National Iodine Solution, a proprietary of the National Drug Co., because inquiries indicated that it was brought extensively to the attention of physicians. The name implies that it is a solution of iodine, and the inference is given that it has the advantages of iodine without the disadvantages. According to the label, "each fluid ounce represents three grains Proteo-albuminoid compound of iodine (National)"; also an alcohol declaration of 7 percent is made. Otherwise no information is given as to the composition either of the "solution" or of "Proteo-albuminoid compound of iodine". Analysis in the A. M. A. Chemical Laboratory indicated that each 100 c.c. contains about 7 c.c. of alcohol, 0.5 gm. of zinc sulphate U. S. P., 0.03 gm. iodine (the solution gave tests which indicated a very small amount of

free iodine; most of the iodine was in the form of ordinary iodide), 0.01 gm. protein and some hamamelis water. While the preparation is claimed to contain 3 grains "proteo-albuminoid compound of iodine", yet the sum of the protein and iodine is equivalent to less than one-fifth grain. The Council reports that it is evident that "National Iodine Solution" is not a solution of free (elementary) iodine as the name suggests; instead, it appears to be a solution of zinc sulphate in witch hazel water containing less than 0.03 percent of combined iodine and not more than a trace of free iodine; that it is sold under unwarranted therapeutic claims, and that a similar or identical preparation sold to the public for the self treatment of gonorrhea by the National Drug Co. as Gonocol has been declared misbranded by the Federal authorities.—(*Jour. A. M. A.*, June 4, 1921, p. 1592).

PROTEOGENS IN SYPHILIS.—C. F. Engels, Tacoma, Washington, reports that two persons came to him who had been treated with Proteogen No. 10 for almost a year. Both patients were four plus to the Wasserman test. He writes: "The tragedy of the whole thing is that here are two people, at least, who have been deprived of adequate treatment for a year, spending their money for ignorance and fakery, getting worse instead of better, and all because of the cupidity of these people (the promoters of the Proteogens) and their success of putting over on some of the weak sisters of the profession this pseudo-scientific bunk". The Proteogens have been the subject of an extensive report by the Council on Pharmacy and Chemistry, which declared the twelve Proteogens inadmissible to New and Nonofficial Remedies because their composition is secret; because the therapeutic claims made for them are unwarranted, and because the secrecy and complexity of their composition makes their use irrational.—(*Jour. A. M. A.*, June 4, 1921, p. 1593).

REOLO.—This is a "patent medicine" which is based on the theory, which has no scientific foundation, that all disease is due to a deficiency or variation in the inorganic constituents—the "cell salts"—of the cells and blood. Reolo is claimed to furnish the needed cell salts and thus to cure diseases due to the deficiency. The asserted discovery of Reolo is described thus: "Dr. A. L. Reusing has finally succeeded in combining by electrical treatment the phosphates of calcium, sodium and iron with the phosphates of potassium and magnesium and has obtained a perfect combination of these revitalizing Cell Salts that he has named 'Reolo' . . ." The A. M. A. Chemical Laboratory reports that Reolo consists of grayish brown tablets having a sweet, chocolate-like and faintly bitter taste. Very small quantities of a phosphate and traces of Magnesium and of an iron compound were present. Large amounts of calcium carbonate (chalk) and sucrose (cane sugar) were present. The tablets did not appear to be medicated in the usually accepted sense. From this examination it would appear that Reolo is essentially a mixture of sugar and chalk.—(*Jour. A. M. A.*, June 11, 1921, p. 1697).

"ASPIRIN-BAYER" AND THE STERLING PRODUCTS CO.—Shortly after the United States entered the war, the Alien Property Custodian took over the property of Bayer and Co., Inc. The Sterling Products Co. acquired the pharmaceutical end of the Bayer concern. After that the Winthrop Chemical Co. was incorporated and seemingly secured control of all the Bayer pharmaceutical specialties, except "Aspirin". The Bayer Co., it was announced, had been merged with the Sterling Products Co., and "Aspirin-Bayer" added to the latter firm's list of "patent medicines": Cascarets, Danderine, Pape's Diapepsin, California

Syrup of Figs, Neuralgine and Dodson's Livertone. Just what relationship exists between the Winthrop Chemical Co. and the Sterling Products Co. we do not know; the "Bayer Cross" is used on the label of the Winthrop products. As the court has ruled that on prescriptions calling for "Aspirin" the Bayer product must be dispensed, physicians should prescribe acetylsalicylic acid and not "Aspiriu".—(*Jour. A. M. A.*, June 11, 1921, p. 1697).

DISAPPOINTMENTS IN ENDOCRINOLOGY.—In the current enthusiasm for so-called endocrinology, medicine may become humiliated by the drift toward a sort of pseudoscience bolstered up with meaningless words and unfounded assumptions. Stewart deserves the thanks of the medical profession for the fearless and critical manner in which he has questioned (Endocrinology, vol. 5, p. 283 (May) 1921) much of the verbal rubbish that goes under the designation of the endocrinology of the suprarenals. There is something stinging, yet deserved, in its implied rebukes, in the words of Dr. Stewart: "On the whole," he says, "it must be granted that hitherto the attempts made to evoke in animals a well marked syndrome characteristic of adrenal deficiency have been singularly disappointing. The contrast is great when we leave this desert, where the physiologists and experimental pathologists have wandered, striking many rocks but finding few springs, and pass into the exuberant land of clinical endocrinology, flowing with blandest milk and honey, almost suspiciously sweet." How much longer will the medical profession continue to merit such criticism? Just so long as the profession continues to give serious consideration to pseudoscientific rubbish promulgated by the exploiters of organic extracts.—(*Jour. A. M. A.*, June 11, 1921, p. 1685).

MON-ARSONE NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Mon-Arsone was put out by the Harmer Laboratories Co. as "A new and non-toxic arseneal for the treatment of syphilis" and that it was claimed that the drug had a therapeutic value equal to arsphenamine but was devoid of toxic action. Chemically, Mon-Arsone is related to sodium cacodylate, which latter has been proved inefficient in the treatment of syphilis. After examining the available evidence, the Council voted not to admit Mon-Arsone to New and Nonofficial Remedies and held that the claim that Mon-Arsone has a therapeutic value equal to that of arsphenamine was unwarranted; that Mon-Arsone should not be used except under conditions that justify the experimental trial of an unproved drug, and that the advertising propaganda for the drug by the Harmer Laboratories Co. as to be deprecated. When the Council sent its report to the Harmer Laboratories Co., prior to publication, the firm announced that the claim that Mon-Arsone is therapeutically equal to arsphenamine had been abandoned. In publishing its report, the Council endorsed the recent warning against the use of untried medicaments issued by the U. S. Public Health Service. It also calls attention to a report on the effect of Mon-Arsone on experimental syphilis recently published by H. J. Nichols, which showed that the drug, when tested on rabbits infected with experimental syphilis, showed no spirocheticidal power.—(*Jour. A. M. A.*, June 18, 1921, p. 1781).

ITTIOLO is an ammonium sulphoichthyolate preparation, manufactured in Italy by the Societa Industriale Chimiche (Guiseppe W. Guidi, New York, agent). The A. M. A. Chemical Laboratory analyzed two specimens of Ittiolo and found that they differed in several particulars from the New and Nonofficial Remedies requirements for the product. The American agent for the product was informed of the results of this analysis. He was advised that Ittiolo

would be omitted from New and Nonofficial Remedies unless standards for it were received within a reasonable time which would correctly indicate its composition. At the expiration of three months the Council had received no assurance from the American agent that any effort was being made to standardize Ittliolo or to insure the uniformity of its composition. Accordingly the Council directed its omission from New and Nonofficial Remedies (Rep. Council Pharm. Chem., 1920, p. 64).

LIBRADOL (manufactured by Lloyd Bros.), according to a "readily removable label" on a trade package, may be used in "colds, croup and acute bronchitis, in local congestions, in lung troubles and acute inflammation of this or any other organ, especially if pain or soreness be present, in lumbago, sciatica or in rheumatic pains of the joints or muscles. Applied to the forehead, it induces sleep." Libradol is offered in two forms, "Libradol Mild" for infants and super-sensitive persons which is said to be "destitute of drug energy", and Libradol "Regular" which is "highly medicated", the "constituents" being "Dracontium, Sauguinaria, Cephaelis, Melaleuca, Lobelia, Laurus, Capsicum, Tobacco". An examination of the information submitted by Lloyd Bros. showed Libradol to be in conflict with the principles and rules that govern in the acceptance of articles for New and Nonofficial Remedies: 1. Composition: The information gives little idea as to the actual composition of the preparation. 2. Indirect advertising: The recommendations for the use of Libradol which appear on the trade package is prone to lead the public to depend on it in cases where definite treatment is imperative. 3. Unwarranted therapeutic claims: Libradol is recommended in a great variety of conditions and is especially claimed not only to relieve pain, but to remove the cause of pain. No evidence for the claim was submitted. 4. Name: The name, derived from Dolor, and Liber, suggests the claimed action of the preparation (the relief of pain) rather than the composition. 5. Irrational composition: It is quite possible that Libradol will relieve pain in certain instances, but this is no justification for the use by physicians of cataplasms containing or made from skunk cabbage, bloodroot, ipecac, melaleuca (oil of cajuput), lobelia, laurus camphora (camphor?), capsicum and tobacco. The combination is thoroughly irrational.

The Council declared Libradol inadmissible to New and Nonofficial Remedies because its composition is complex, irrational and semi-secret, and because its name and the unwarranted therapeutic recommendations made for it will lead to its ill-advised use (Rep. Council Pharm. Chem., 1920, p. 65).

BOOK REVIEWS

PULMONARY TUBERCULOSIS WITH CASE HISTORIES, by Edward O. Otis, A.B., M.D., Professor of pulmonary diseases, etc. Second edition, cloth, 220 pages. \$3.50, Boston. W. M. Leonard Publishing Company, 1920.

This is one of the very valuable case history series by the same publisher. While it is intended for the medical student and general practitioner, yet it has been adapted for the needs of the lay reader and is especially valuable to the tuberculosis worker. It deals with the many problems connected with the diagnosis and management of tuberculosis cases. Case histories offer one of the very best methods of teaching, inasmuch as they approach the real clinic. The histories that have been included in this work cover every phase of the subject, including diagnosis, differential diagnosis, artificial pneumothorax and

treatment. Of especial interest is the chapter on examination of soldiers for tuberculosis, and the essential points in the physical examination, as recommended by the government experts, may well be adopted in civil life.

TREATISE ON FRACTURES. By John B. Roberts, A.M., M.D., F.A.C.S. Emeritus Professor of Surgery in the University of Pennsylvania Graduate School of Medicine; President of the American Surgical Association; and James A. Kelly, A.M., M.D., Associate Professor of Surgery in the University of Pennsylvania Graduate School of Medicine; Attending Surgeon to St. Joseph's, St. Mary's, St. Timothy's and Misericordia Hospitals. Second Edition. With 1081 illustrations: Radiograms, Drawings and Photographs. Philadelphia and London: J. B. Lippincott & Company.

This work has been, for this second edition, entirely rewritten and reset. In its present form it is one of our most valuable and authoritative books on the subject of fractures. The authors have profited by the clinical opportunities of the World War and have revised many of the methods of treatment advocated in the first edition. Every surgeon can now agree with the statement in the preface that "Lane's insistence that closed fractures need operative fixation with steel plates, as a usual routine, has been found to be an untenable creed. Treatment of fractures of the femur and of the tibia by suspension, long ago advocated by N. R. Smith, Hewson and Hodgen in this country, and by others in Europe, has been reinstated in general favor." In the preface, as well as in the body of the book, the authors stress the fact that the radiographic study of fractures is frequently deceptive and the reviewer feels that this point cannot be emphasized too frequently. The first six chapters deal with the general considerations of fractures and cover in a most satisfactory manner such subjects as Epiphyseal Separations and The Operative Treatment of Closed Fractures. The seventh chapter is devoted to the consideration of Fractures of the Cranium—this chapter is, for the most part, a very valuable one. However, the authors fail to indicate that the solution of the problem of when to operate in basal fractures depends almost wholly on the presence or absence of the symptoms of intracranial pressure. Sufficient attention is not directed to the value of the decompression operation. The remaining twenty-four chapters systematically handle the fractures of the various parts of the skeletal system. The authors do not seem entirely to accept Jones' Golden Rule for the treatment of elbow joint fractures, but they do recognize the value of Whitman's method of dealing with fractures of the femoral neck. Particular attention and praise must be given to the ten hundred and eighty-one illustrations—the reviewer can recall no similar book which has so many valuable radiograms and photographs. If this book were widely studied and its teachings adopted there would be far fewer cripples in America. The authors are eminently correct in claiming that "if the same degree of attention was given to fractures as is given to abdominal surgery, there would be better results obtained."

OPERATIVE SURGERY. By John J. McGrath, M.D., F.A.C.S. Professor of Surgery, Fordham University; Consulting Surgeon to the People's Hospital; Visiting Surgeon to the Fordham, Columbus and New York Foundling Hospitals, etc. Sixth Revised Edition. Price \$8.00. Philadelphia: F. A. Davis Co.

Since its first appearance in 1902 this book has passed through six editions—this fact is a sufficient (Continued on Advertising Page xviii)

Treat Hay Fever With Suprarenalin



SUPRARENALIN is the remedy in Hay Fever. It may be administered locally, internally or Hypodermatically.

Locally—Solution and ointment are applied to affected parts.

Internally—Solution should be given, so that the patient will get from 1/70 to 1/10 of a grain; the dose repeated in from 10 minutes to 2 hours, according to effects.

(Let the patient hold Suprarenalin in the mouth for awhile, as the best systemic effects are got by absorption through the membranes.)

Hypodermatically—Suprarenalin Solution is injected into the arm or neck.

Suprarenalin is recommended in Hay Fever in various forms. Herewith are suggestions made by men of authority.

One recommends using solutions of varying strengths from 1:10,000 to 1:1000 made up with normal salt solution. To sustain the relief to some extent, he suggests spraying over the constricted mucous membrane a 5 grain to the ounce solution of menthol in alcohol, benzoic acid or other light oil.

Another uses Suprarenalin Solution in strengths varying from 1:10,000 to 1:1000, applying these locally to the conjunctiva and nasal membranes. He also suggests the following combinations which are snuffed into the nasal passages or insufflated by means of a nasal blower.

1. Suprarenalin 1 part
Zinc Stearate (Comp.) 100 parts
Heavy Magnesium Carbonate 900 parts
Mix. Triturate well.
2. Suprarenalin 1 part
Zinc Oxide 100 parts
Bismuth subcarbonate 400 parts
Mix. Triturate well.
3. Suprarenalin gland substance 1 part
Zinc Stearate 20 parts
Zinc Oxide 80 parts
Mix. Triturate well.
4. Suprarenalin 1 part
Bismuth subcarbonate 300 parts
Zinc Oxide 300 parts
Zinc Stearate 200 parts
Mix. Triturate well.

A prominent nose and throat specialist recommends:

Cocainae hydrochloridi	15	or	grs.	iiss
Sodii boratis	30	or	grs.	v-
Suprarenalin Sol. (1:1000)	4	or	dr.	i
Glycerin	2	or	dr.	ss-
Aqua Camphorae ad.	30	or	oz.	i

M. Sig. Use as a spray to the nose four or five times daily or oftener if needed.

Suprarenalin Solution 1:1000 (Armour) is stable, uniform, non-irritating and is free from chemical preservatives. Literature to Physicians.

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commendation for any medical text book. The author states that he has spent much time and effort in the preparation of this sixth edition and he has certainly covered his field in an excellent manner. Much space is rightly devoted to surgical anatomy and the various operative procedures are clearly and accurately described. In an Operative Surgery of eight hundred and fifty pages many descriptions must be abbreviated and others omitted. The reviewer feels that it was a mistake to devote eight and one-half pages to a description of three methods of extirpating the Gasserian Ganglion while ignoring Spiller's operation of sensory root section. This book, however, can be highly recommended to students and practitioners who desire a single volume text book on operative surgery.

MEDICAL ELECTRICITY, ROENTGEN RAYS AND RADIUM, with a practical chapter on **PHOTOTHERAPY.** By Sinclair Tousey, M.D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Third edition. Thoroughly Revised and Greatly Enlarged. Octavo of 1337 pages with 861 practical illustrations, 16 in colors. Philadelphia and London: W. B. Saunders Company, 1921. Cloth \$10.00 net.

The third edition of this important work appears in a greatly enlarged and thoroughly revised form. Most of the new matter has been added to the sections which are devoted to the x-ray. Recent advances in gastro intestinal radiology are sufficiently described. Much attention has been given to the technic of dental radiography and the interpretation of dental films—no other text book so well describes this important subject. It is interesting to note that, in the author's opinion, the surgeon should be given the radiograph and not merely the radiologist's report of his examination, because, if the surgeon sees that "the picture is a mere, foggy daub" he will not run the risk of performing a useless operation. It is rather surprising that the author makes no mention of Dandy's work on cerebral ventriculography. In the opinion of the reviewer, more attention should have been given to the present day methods of pyelography. However, this book covers the rest of its field so well that it should be in the possession of every man who is at all interested in the subjects of medical electricity and the Roentgen rays.

INFECTIONS OF THE HAND. By Allen B. Kanavel, M.D., Assistant Professor of Surgery, Northwestern University Medical School; Attending Surgeon, Wesley and Cook County Hospitals, Chicago. Fourth edition, thoroughly revised. Illustrated with 185 engravings. Price \$5.50. Philadelphia and New York: Lea & Febiger, 1921.

A more valuable monograph than Kanavel's *Infections of the Hand* has never been published on any similar surgical subject. This fourth edition "has given the author the opportunity of supplementing the text with the knowledge gained during the great war upon gas bacillus and streptococcus infections as well as permitting the addition of a chapter upon the restoration of function in infected hands". Previous editions have been adequately reviewed in *THE JOURNAL*. The new chapter on the restoration of function is a very valuable addition to the work. As the author remarks, "The after treatment of patients suffering from injuries and infections of the hand is frequently so neglected, or carried out in such a haphazard manner, that the ultimate results fall far short of what might be attained." The various agencies which may be employed for aiding the return of function are carefully described. The reviewer would urge every physician who attempts to treat injuries and infections of the hand to study and follow the teachings of Kanavel.

ABSTRACTS

MEDICAL AND MEDICOSOCIAL PROBLEMS OF THE HOUR

In the opening sentence of his presidential address read before the American Medical Association at the Seventy-Second Annual Session, Boston, June, 1921, HUBERT WORK, Pueblo, Colo. (*Journal A. M. A.*, June 11, 1921), says, there is no common meeting ground except that of service. The American Medical Association is a body representing more than 80,000 trained medical men. It is the Plymouth Rock of American medicine, and we may look back through its history, and therein trace the evolution of the healing art. It is our national health service, and the common meeting ground of its members. Its special societies refine and polish its parts, which are here assembled into a working whole of contributed, coordinated, scientific, practical medicine. Its official journal is the recognized authoritative recourse for medical and for lay minds alike. The governing purpose of this association is to collect and disseminate the truth in medicine, to perfect the science, to expose pretense, and to elevate medical men, further to encourage and associate individual efforts, and to bind medicine to the government, its armies and its municipalities. And it hopes that the church and public charities, through the common tie of human sympathy—the hall mark of a Christian civilization—may also join with it for the greatest good to the greatest number. Among the special subjects discussed by Work are: graduate teaching, health centers, hospitalization, group practice, standardization of medical colleges and hospitals and the elevation of the standard of surgeons.

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Sixty-eight cases of hyperthyroidism were studied by Charles G. Beall, Fort Wayne, Ind. (*Journal A. M. A.*, June 11, 1921), with the object of comparing the clinical diagnosis with the basal metabolism. He found that an increase in the basal metabolism of 10 percent is present in two-thirds of the cases presenting clinical signs and symptoms of mild hyperthyroidism. An increase in the basal metabolism of 10 percent is present in one-fourth of the cases in which the clinical signs and symptoms were not considered sufficient to warrant a diagnosis of hyperthyroidism as being the prime factor in the diseased condition. As the basal metabolism rose, the percentage of cases clinically falling into the hyperthyroidism groups increased rapidly.

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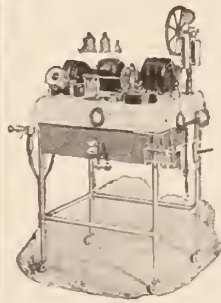
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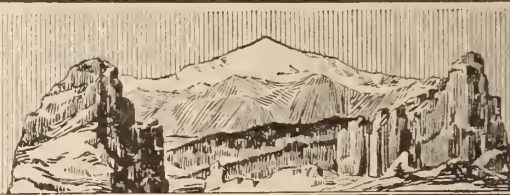
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ORIGINAL ARTICLES

THE INDICATION FOR MASTOID OPERATION*

G. HENRY MUNDT, M.D.
CHICAGO, ILLINOIS

Because of the character of the body to which this is presented I will refrain from considering those cases that are so plainly operative that anyone can see it. I refer especially to the subperiosteal mastoid abscess. I am well aware that some subperiosteal mastoid abscesses in very young children may be successfully drained by a myringotomy, but it is my opinion that opening the mastoid itself is to be preferred in a large proportion of cases. Here I cannot refrain from quoting that pioneer in this work, Fredrick Whiting: "As a general proposition we may affirm that whenever Whild's incision is indicated a mastoid operation is imperative."

Because of the enormity of the subject of mastoid complications their consideration will be omitted.

What I will make an effort to present to you is a stimulus to base judgment on the advisability of mastoid operation more on the objective than the subjective symptoms of the patient. In other words, it is my opinion that one should have quite clearly in mind the changes that are taking place in a mastoid process; try to visualize the bone changes, and on this knowledge base an opinion about operation, keeping in mind that it is an osteomyelitis the same as in any other bone.

One should remember, as Dench says, that the mastoid is simply one part of the middle ear, that every case of acute middle ear inflammation is really a mastoiditis, and that an ear recovering by either incision or spontaneous discharge is a mastoiditis recovering with a minimum of surgical interference. Simply because a mastoid is pervaded with pus is not in itself an indication for operation. Thus one must not advise operation when he sees a cloudy mastoid on roentgenogram, but must look farther to determine whether there is bone involvement.

I now wish to make a definite statement by which the need of operation in every case can be definitely weighed. A mastoid which is once the seat of definite bone involvement is operative at once and will remain so until the end of the process unless in its progress it develops that it is one of the cases which goes on to either entire sclerosis or eburnation, or is the seat of a slow necrosis followed by epidermization of the mastoid and middle ear which is virtually a radical operation by nature.

One of the most difficult types of mastoiditis to diagnose is the closed mastoid, which is infrequent though it does exist. I mean that type of mastoiditis in which there is no concurrent demonstrable involvement of the tympanum proper, the antrum being closed off from the tympanum either by bony atresia of the additus ad antrum, or by hypertrophy or hyperplasia of the mucoperiosteum of the attic. This condition may be brought about in the former (bony atresia of the additus ad antrum) by a blood borne infection, and in the latter by either a blood borne infection or by infection entering the mastoid process from the middle ear and the mucosa swelling, the middle ear clearing perfectly, at least showing no signs of acute trouble, while the mastoid process is the seat of acute inflammation. When pain and tenderness develop in the mastoid region with no visible changes in the middle ear, the patient needs the closest observation. Teeth as a causative factor as well as all neuralgia should be eliminated, and acute inflammation of the soft tissue over the mastoid should be eliminated. Leucocytosis is suggestive; blood cultures may give some information; general febrile reaction when all other areas are eliminated speak for infection; changes in the external soft tissue or enlargement of the post cervical glands bespeak mastoiditis; but it is my opinion that a well made, properly interpreted roentgenogram will give more definite information than anything else in this condition. The diagnosis of a closed mastoid is a definite indication for posterior drainage. This type of mastoiditis may be easily confused, and I think very often is, with the mastoiditis in which there is no redness of

*Read before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association at the South Bend session, September, 1920.

the membrana tympani, but it is lusterless, with changes in the appearance of particularly the handle of the hammer, indicative of fluid in the middle ear. These cases eventually will have posterior drainage, so delay is of no value.

We now come to the consideration of the mastoid with otorrhea. I am presupposing that furunculosis of the external auditory meatus has been eliminated. The advent of acute otitis media in a patient with an old purulent otorrhea is a rather definite indication for posterior drainage.

Pain is the one condition which will cause the patient to demand relief. If after free incision of the membrana tympani pain persists for one or two days, or tenderness for three days, operation is probably indicated. Dench says that in the patient where pain is the indication for operation the mastoiditis is of the hemorrhagic type and the cells are extensively developed. Tenderness as a symptom is at times very valuable. However, the amount of tenderness is very largely dependent upon the anatomical characteristics of the mastoid. Given a very thin cortex it will be found early and may be very general, while with a thick cortex it may never be elicited. Tenderness lasting any considerable length of time probably bespeaks the need of operation, as it probably indicates more bone involvement than just inflammation of the mucoperiosteum. The recurrence of tenderness after it has subsided during an acute otitis media probably means definite bone involvement and indicates the need of operation.

Temperature is of little import usually. Some severe cases carry little febrile reaction, while others less severe have considerable elevation of temperature. The temperature is largely dependent upon the freedom of drainage and the character of the infection. With all other classical symptoms of mastoiditis, with a constant high temperature, or with sudden rise or fall of temperature, with or without rigors, the mastoid should be opened. It is my opinion that in a patient with the classical symptoms of mastoiditis requiring operation, the fact that he may have a normal temperature does not in any way negative the advisability of operation.

Persistent bulging of the membrana flaccida and narrowing of the canal at the fundus by sagging of the posterior-superior wall is an almost pathognomonic indication for operation. A persistent sagging of the posterior-superior wall of the canal I think indicates an osteomyelitis which in all probability will not recover until operated.

In an adult when there is enough trouble to cause redness and swelling over the mastoid it should be operated without delay, as there is nothing to be gained by waiting, and an early operation may save the patient from a severe

complication, as the same process that produces redness and swelling by involvement of the cortex may cause trouble in the brain or sinus. In nearly all patients with acute suppurative otitis media some changes in the soft tissues attached or adjacent to the mastoid will be found, and the posterior cervical glands will be involved, this condition in itself being of no operative importance. Extension of infection (pus) into the glands of the neck or drainage through the mastoid under the sternomastoid muscle (Bezold abscess) demands operation.

Given a patient with an enormous discharge, more than could be expected from the middle ear and mastoid, *i. e.*, it runs out, operate at once. Sudden cessation or marked diminution of discharge, with increase in severity of symptoms, if the opening in the drum membrane has not closed, is a rather positive indication for operation.

The organism found in the discharge is very important. However, the smears and by all means cultures should be taken from the middle ear through the perforation, or the canal should be cleaned and the specimen taken as it exudes from the middle ear. This is very important, as cultures taken from the external auditory meatus, unless proper precautions are taken, are sure to be contaminated.

The streptococcus mucosus capsulatus is one of the strongest indications for operation, because it is especially liable to produce severe complications, being an eroding type of organism. In a patient with streptococcus mucosus capsulatus mastoid if operation is delayed, even though the perforation in the drum membrane heals, the closest watch should be kept for many months, as this particular organism may remain dormant or at least mildly active and suddenly cause the gravest trouble. Pneumococcus accompanied by micrococcus catarrhalis is almost a positive indication. Streptococcus pyogenus infection demands operation. Pneumococci alone or with staphylococci, or staphylococci alone is of much less importance.

In the average patient an acute otitis media should heal in a maximum of three weeks, and if it does not it probably will not heal until the mastoid is opened. There probably will be no danger in waiting longer if none of the definite operative indications have appeared. However, by this time the future course of the condition can probably be foreseen by a well made, properly interpreted roentgenogram.

Finding a sequestrum or bone dust in the discharge is a positive indication for operation as the condition will never heal until operated.

Leucocytosis is usually present (11000-18000), the polymorphonuclear neutrophils being increased from the normal of 72-75 percent to 85-90 percent. If there is bacteremia by way

of sinus or smaller vessels there is apt to be higher leucocytosis (25000-30000) and this is a rather positive indication. Blood cultures are of distinct value, as positive cultures with an important organism would indicate operation.

When symptoms continue after a good free incision of the membrana tympani it is probably folly to repeat, and the mastoid may as well be opened at once as to wait. Dench says "I have only one word for repeated incisions of the drum membrane and that is a word of absolute condemnation".

Profound involvement of the hearing function over a period of one to three weeks, when there is a free incision of membrana tympani, calls for operation. Heath is much less conservative on the time element and advises practically immediate operation when there is marked deafness, to preserve the hearing as well as to shorten the period of disability.

Marked mastoid symptoms intervening in the course of the acute exenthematous diseases call for more prompt operation than the ordinary case.

In nearly every patient with chronic otitis media it is necessary to attack the mastoid to cure the discharge. Caries, which may be demonstrated by polypi formation, granulation tissue, bone dust or sequestrum, demands operation. Perforation in the superior or posterior portion of the drum membrane probably indicates operation. Certainly cholesteatoma formation which may be recognized by finding sodden masses in the external auditory meatus, or where the cholesteatome may be seen, demands operation. Periodic mild pain in mastoid or ear during chronic suppuration demands operation. Certainly marked acute exacerbation in a chronic suppuration is one of the strongest indications for operation. Mastoid fistula demands operation. Properly qualified facial paralysis demands operation. Labyrinthine irritation indicated by vertigo in a chronic suppurative otitis media should be operated.

I now want to discuss very briefly what I consider one of the most valuable methods we have at our disposal to interpret mastoid disease, the roentgenogram. To get information of value the two mastoid areas must be rayed and compared. It has been amply demonstrated that in a very large proportion of persons the mastoid bone development is practically the same on both sides. To become competent to interpret mastoid roentgenograms one should work out with his roentgenologist a position to be used and follow it with all patients. Then there are certain technical Roentgen methods with which I am not conversant, which must be carried out by the roentgenologist to get detail.

Stereoscopic plates are much better for study, it being possible to get a clearer idea of anatomic detail. However, a well made flat plate is of practically as much value in determining the amount of bone involvement in a mastoid.

In practically every acute suppurative otitis media a roentgenogram will show the mastoid cloudy because it is pus filled, but this finding is of no operative importance, as the mucous membrane in the mastoid is as competent to heal as is the mucosa of the tympanum after it is pus filled. If while the mastoid is cloudy, or later, the intercellular septa show some breaking down, it is my opinion that the mastoid had as well be opened then as later, as it will probably never heal until it is opened.

In the type of acute mastoid which Beck calls cell route or confluent mastoiditis, the roentgenogram interpretation is more difficult. However, much of value can be gained by study of a series of plates. The progress of acute mastoiditis can well be watched and much of value can be learned by study of plates made a few days apart. In the chronic suppurative ear if it is feasible to procure a roentgenogram it should be done before operation, not alone for information of pathology present but for study of anatomic detail. When in a chronic suppurative otitis media there is a distinct breaking down of septa, or even partial sclerosis, the mastoid should be operated.

In closing I wish to say that in a questionable case the error had better be one of commission than omission, for as Grant says, "the responsibility is greater to decide against than for operation."

DISCUSSION

DR. W. S. TOMLIN (Indianapolis): In enumerating the different indications for mastoid operations it seems to me that the subject has been very thoroughly covered. Perhaps if anything was left out it was reference to the consent of the patient or the patient's guardian—and we all know that consent to operate sometimes is more difficult to obtain than it should be, from the fact that the general public is not well educated to the fact that not only is the life of the patient in danger, but what is of very great importance also, the hearing power is very much endangered by a continuing otitis media with suppuration, especially if there is indication of pathology in the mastoid cells or tendency towards breaking down of the bony structure.

I would like to emphasize that the operator or examiner should attempt to visualize the pathology of the situation, or what is going on in this diseased ear. Is it a process of bone disintegration, or is it a process of mucous inflammation? When he is able to visualize his

cases he will be able to arrive at conclusions that are worthy of being quoted.

The essayist has presupposed, and quite properly, that other things being equal a profuse discharge, acute or sub-acute, does not of itself, and without regard to other conditions, indicate a mastoid operation; that with a profuse discharge you will readily know that the enormous quantity, comparatively speaking, is not coming from the tympanic cavity, and that such a discharge would not be coming from the mere surface of the membrane but from the deeper tissues, more cells being affected than are on the surface. The origin of this otitis is a very important thing. Otitis that follows scarlet fever is in a very large percentage of cases operable almost from the start because the peculiarity of the infection lies in the fact that it is particularly prone to attack the deeper structures, and one need not wait in the hope that the inflammation will subside, as he might if it followed simply an acute coryza.

Some of these cases of chronic otorrhea are continuously dependent upon associated conditions. They may have had their origin from infected sinuses or from an accumulation of adenoid hypertrophy, or from an infection in the epipharynx, and those cases do give some real hope of recovery when otherwise they would not be subject to a postponement of operation. It is my belief that where the general health of the patient seems to be fair, and the individual has a considerable resistance and recuperative power, the clearing up of a frontal sinusitis or a sphenoidal sinusitis will result in the recovery of a case that otherwise might be considered hopeless, so far as getting along without an operation is concerned.

There is one other thing that we should visualize in connection with these cases, and that is the position of the patient and the patient's guardian. From a personal experience I may say that it will appeal to you quite differently if you can imagine yourself at the other end of the scalpel. Try to place yourself in the other man's place. If this child were yours and you were inclined to operate within a week of the beginning of an acute otitis media, would you consent to have the child operated in so short a time, when there were no other menacing symptoms than acute otitis media with a mastoid involvement? Would you, placing yourself in the position of the father of that child, be willing to have that child subjected to an operation at once, without waiting to see if something else could not be done? Or place yourself in the position of the business man whose time is of importance, and whose hearing is of importance. If you can make up your mind that if you were so situated you would not be willing to take a

chance on the further destruction of your hearing by the continuation of this otorrhea, then I think you may operate with impunity.

DR. GEORGE W. SPOHN (Elkhart): I am sorry that Dr. Mundt did not mention the subject of vaccines. I wish the discussants would bring out that question, and present their opinions for or against vaccines in mastoid therapy.

There is no doubt that all chronic cases of mastoiditis should be operated after they have run two or three months. In regard to the acute condition, I believe, as Dr. Tonlin said, that we should put ourselves in the place of the patient. I believe that if we did so, very few of us would allow ourselves to be plunged into an operation at once without giving due consideration to the case.

In regard to advising an operation because of pain and discharge: I am not in accord with the quotation from Dench, made by the essayist, that he did not believe in repeating incisions of the drum. I do, and also I believe in the use of the suction pump.

I never could get a roentgenogram made by a roentgenologist so perfect that I could say positively what the condition of the mastoid cells was. By taking both mastoids together, and if we could have a roentgenogram so accurate that we could say positively that the pus is occluded in the mastoid cells, of course we would have an operation. But can we get such a skiagraph? I have never seen one. The skiagraph is only one of the means of diagnosis, and should be considered with all the other clinical symptoms.

The best treatment that I have found in the acute cases is the use of the mixed streptococcus or autogenous vaccines. The use of them will stop the symptoms of pain, and the swelling and discharge will subside in a very short time. If we have an involvement of the lateral sinus we must operate. If we have an involvement of the glands anterior to the ear we know positively that it does not come from the mastoid cells. I try to avoid operating in practically all acute cases. Most cases can be cured by the use of the autogenous vaccines. A good autogenous vaccine, or a good stock vaccine given on alternating days, beginning with a quarter of a cc., and the next day a half cc. and then three-quarters cc., and then one cc. and never above that, will give splendid results.

DR. M. H. KREBS (Huntington): I have found that the absence of pain does not at all negative a diagnosis of mastoiditis, or the indication for operation. I have in mind one instance where there was complete absence of pain, and the indication for operation was made entirely by the x-ray and stereoscopic picture. Of course it is very difficult to get stereoscopic pictures that are absolutely accurate, but when

we have one that is fairly reliable we have a picture of the mastoid in three dimensions. We are then enabled to see the exact conditions, and are in better position to go into the operative field.

As I understood the essayist, pain seemed to be greater with a sclerotic mastoid with a thin cortex. My experience has been just the opposite. I have noticed that I have more pain in patients who, upon operation, show a mastoid of the sclerotic type with a thick cortex, than in those with a mastoid with a thin cortex and of the pneumatic cell type. This I have ascribed to greater resistance of the bony structure.

I do not open up the mastoid in acute conditions, preferring to wait several days until a large portion of the cells have broken down, as shown by the x-ray picture.

DR. HARRY BOYD-SNEE (South Bend): I wish to emphasize the consideration of the bacteriological factor as an indication for mastoidectomy, particularly in those cases from which streptococcus mucosus capsulatus can be isolated by culture. I should like to hear from him on this subject, and I wish to go on record as being of the opinion that isolation of the streptococcus mucosus capsulatus by culture from either an acute or a chronic suppurative otitis media is of itself an absolute and imperative indication for immediate operation. My opinion is based on observation and study of a group of 312 cases of streptococcal osteomyelitis of the temporal bone with involvement of the mastoid and coincident suppurative otitis media on which mastoidectomy was done. In no case when mastoidectomy was done immediately, where the streptococcus mucosus capsulatus was recovered from the middle ear, did we uncover a condition within the bone that would contra-indicate the operation, and cultures obtained from the infiltrated bone were streptococcus positive in every case.

A fine point set forth by Dr. Mundt is the fact that notwithstanding complete subsidence of otitis media, as evidenced by closure of perforation, clearing of drum membrane and restoration of auditory function, we can look for and we may find present an active osteomyelitis within the mastoid or adjacent bony structure. Complete resolution of an otitis media from which the streptococcus mucosus capsulatus has been recovered does not exclude osteomyelitis.

DR. D. O. KEARBY (Indianapolis): I would like to emphasize the value of the free incision of the drum membrane under anesthesia and after waiting perhaps ten or fifteen minutes, the removal of the blood clot that forms at the point of incision.

Another point about the roentgenogram that I have not heard mentioned, and to which it

seems to me attention should be called, especially in adult cases, is the type of sclerotic bone that will be found due to an old acute mastoiditis that the patient may have had when a child, and has gone unrecognized. In three or four of our cases we have had just such a circumstance brought to our attention when we operated,—a positive picture, and when we operated, we found a sclerotic mastoid.

DR. ALBERT E. BULSON, JR. (Fort Wayne): Dr. Mundt's paper covers the subject so thoroughly and yet concisely that but little can be added.

I desire to emphasize what he has said concerning the presence of inflammation or even pus in the mastoid as not in themselves being an indication for operation. As a matter of fact, there are altogether too many men who accept tenderness over the mastoid—even a few hours or a few days after the onset of the middle ear symptoms—as an indication for operation, and they proceed to rush the patient to the hospital and do a simple mastoid operation, which in all of the cases at that stage of the trouble is unnecessary, and probably in 75 percent of the cases never would be necessary if appropriate treatment was adopted. I sometimes think that it is knavery rather than ignorance which prompts ear surgeons to do mastoidectomies under such circumstances.

Dr. Mundt's statement that an acute middle ear suppuration engrafted upon a normal ear usually can go three weeks before it becomes necessary to operate for accompanying mastoid complications, probably will hold true in the majority of instances, and the cases requiring operation earlier will be exceptions rather than the rule. As pointed out by the essayist, the character of the infection will have much weight in the decision.

Personally, I feel that too many of these cases do not have the proper attention prior to the development of mastoid complications requiring operative interference, and by that I mean early and free incision of the drum membrane, enhanced elimination by bowels, kidneys and skin, and rest in bed. A careful watch of the leukocyte count is very important, and I care more for it than I do for fever, pain and tenderness, though it is the composite picture which really decides the question of operation.

Practically all cases of acute suppuration of the middle ear are accompanied by mastoid tenderness, but that symptom alone is not an indication for operation. Sagging of the posterior superior wall of the meatus perhaps is one of the most important indications for operative interference.

So far as roentgenograms are concerned, the interpretation should be made by one who is experienced in the work, or many mastoids will

be opened unnecessarily. As pointed out by Dr. Mundt, mere cloudiness is not an indication for operation, but breaking down of the bony structure and extension of the cloudiness should be considered significant. On the whole, I think I have been led astray by roentgenograms more than I have been helped, for it is my experience that when the roentgenogram really indicates the necessity for an operation, there are other manifestations which already have pointed to the necessity for such attention.

DR. G. H. MUNDT (closing): I quite agree with Dr. Tomlin that in some cases, and probably in a considerable number of patients who have chronic otorrhea, a cleaning up of the condition of the nose or epipharynx will clean up the suppuration. I have had children with chronic suppurative otitis media who did not get well until we took care of their adenoids and tonsils, and then they cleared up.

Once the mastoid bone becomes involved, once there is established in the mastoid process osteomyelitis, it is my opinion that operation is indicated and that there is no use of doing anything else. You might just as well operate the mastoid as to wait. But given a clear mastoid, and a middle ear with polyps, if you can get the polyps out of the middle ear and clean up the epipharynx, it is my opinion that the condition may clear up.

In my paper I say, "In nearly every patient with chronic otitis media it is necessary to attack the mastoid to cure the discharge. Caries which may be demonstrated by polypi formation, granulation tissue, bone dust or sequestrum demands operation of the mastoid."

Relative to the use of vaccines, I did not take up the treatment of chronic otitis media because it was not considered as coming under the subject of the paper which is the discussion of the indications for operation.

Regarding repeated incisions, if you will read my paper you will find that I quoted from Dench on that. Personally I have incised the drum membrane more than once. Free incision, a very free incision, is undoubtedly indicated.

Regarding Dr. Spohn's inability to get roentgenograms which are valuable: I believe there are a large number of men who are not getting what they should from roentgenograms of the mastoid, or the accessory nasal sinuses. If one will take the time to get a definite position, I don't care whether he does it on flat plates or on stereoscopic plates, and if he will study some normal plates, and then have plates made of his mastoids, it will only be a little while until he will learn that he can get a great deal of value out of them. A mastoid which is pus filled means nothing, but when gradually the

intercellular septa starts to break down, when you have a gradual enlargement of the pus-filled area with no intercellular septa, you have a definite osteomyelitis, and it is my opinion that you might just as well attack the mastoid then as any time.

The third discussant spoke on the subject of pain. I did not mean to bring pain in as an indication for operation, other than to say that there is the occasional patient with a hemorrhagic mastoid who has very intense pain which nothing relieves, and I think then one should open the mastoid.

I think Dr. Bulson is quite right in his statement regarding early operation in acute otitis media. I think that a man who hastens to open the mastoid in acute otitis media is all wrong. I put an arbitrary time limit there of three weeks, basing it on the statement made by Norvall Pierce a number of times that in his opinion the temporal bone started decalcification at about three weeks. But understand, I use three weeks as an arbitrary time limit; I don't believe that every mastoid should be opened at the expiration of three weeks.

Dr. Bulson's statement regarding the blood count also is right. The man who does not study his poly count, and frequently, in a questionable case, is making a great mistake.

I think the otologist should interpret his roentgenograms. I do not believe that he should depend on the roentgenologist. I look at them with a roentgenologist, and there are frequently times that he tells me something that I do not see. But I would rather use my own judgment on it.

Certainly the statement in regard to streptococcus mucosus capsulatus is correct. I have read with considerable interest that Dench had seen a number of patients, and had followed them over a considerable time, who had streptococcus mucosus capsulatus myelitis in which the drum membrane healed and the patient went on for nearly two years. But the next patient that I see who has a streptococcus mucosus capsulatus in his middle ear, I will either open his mastoid or he will get somebody else to take care of him.

The sclerosed mastoid shown on roentgenogram is not in itself an indication for operation, in my opinion. The sclerosed mastoid only is the same as a mastoid which is cleaned out by caries and healed. The point which is of value in a sclerosed mastoid is that high up in the tip you see some cells. Those patients will have a fistula, probably extending from those cells, and the operative indication comes when you find cells high up. Of course you cannot see the fistula through that sclerosed mastoid.

SIMPLE GLAUCOMA

ITS EARLY RECOGNITION AND TREATMENT*

ALBERT E. BULSON, JR.

FORT WAYNE, INDIANA

Simple glaucoma is so insidious in its onset and so devoid of striking symptoms that it often exists for some time without attracting serious attention on the part of the patient, and not infrequently is overlooked by the physician. The fact that the disease occurs most frequently at about the age when presbyopia sets in is in itself sufficient to cause the patient to believe that all he needs is a pair of glasses to correct the trouble, and he consults an optician or traveling spectacle vender with the natural result that his trouble is undetected. However, the optician and patient may not be the only ones at fault, for the careless examiner who poses as an ophthalmologist may overlook some of the significant manifestations because central vision remains good, and be content with a prescription for glasses for the unfortunate patient when in reality appropriate local treatment should be instituted to retard the progress of the disease.

As a matter of fact, while simple glaucoma is essentially a disease of middle life, it may also occur in comparatively young adults. A case occurring in a patient under thirty years of age, and at present under my care, is an instance. It is, therefore, of the utmost importance to be on the lookout for the disease when making a routine examination of any patient, and especially those who are supposed to be in need of glasses only in order to obtain the desired relief.

Probably every physician who does eye work is familiar with all of the cardinal symptoms and manifestations of simple glaucoma, though we know from actual experience that not a few cases of well-marked simple glaucoma, possessing good central vision, have been entirely overlooked by even some physicians who pretend to be eye specialists. This blunder not infrequently is due to the inexcusable habit of taking case histories carelessly, and either neglecting to make an ophthalmoscopic examination or making such examination in a very hurried and superficial manner. In consequence the contraction of the field of vision, the beginning disc cupping, and the increased intraocular tension escapes the examiner altogether.

It is, therefore, unfortunate, so far as the patient's condition is concerned and the probability of having the disease promptly recognized, that there is an absence of any marked external symptoms and no inflammatory attacks and no pain. The disease begins so gradually

and progresses so slowly, though nevertheless certainly, that the patient—unless he be unusually solicitous about his own welfare—is very apt to fail to seek medical help. He may have had some prodromal symptoms such as attacks of foggy vision or halos about lights which he attributes to indigestion or fatigue, though as a general thing the disease has continued for some time or until he notices a distinct lessening of his accommodation and with it impaired vision before he finally seeks relief. The careless examiner who gives his patient but superficial attention, finding the central vision normal or nearly normal with correcting lenses, contents himself with a prescription for glasses, and the patient is afforded temporary relief through the increase in the acuity of his vision, only to discover a little later that something more must be done in order to improve the rapidly failing vision.

My purpose in discussing this subject is to emphasize the importance of recognizing this insidious disease at a very early date in the hope that not only may the ravages of the disease be checked and inevitable blindness be prevented, but that useful vision may be retained for many years. However, if simple glaucoma is recognized as promptly and as often as it should be, it will be necessary for medical men to be a little more thorough in their methods of examination.

The diagnosis of simple glaucoma is made by noting the contraction of the field of vision, the increase of intraocular tension, and the picture presented when the ophthalmoscope is used. Contraction of the field of vision perhaps may have been noted by the patient, and in a well developed case of simple glaucoma the patient may remark about the "gun barrel" vision or difficulty in seeing anywhere but straight ahead. It may be detected by the examiner in a crude way by hand movements while the patient directs his vision straight ahead, but more accurately by the use of the perimeter. A shallow anterior chamber, such as seen in other types of glaucoma, rarely if ever exists. Usually the pupil is a trifle larger than normal and is inclined to be a little sluggish, though it acts to light and accommodation.

So far as tension is concerned, that in this day and age is a matter for the detection of which the tonometer is required if we are to make early diagnoses. While it is true that in well-marked cases of glaucoma increased tension may be detected by palpation, yet in the incipient cases palpation is next to useless and the accurate tonometer must be relied upon. The instrument should be used oftener, and always in suspicious cases. In fact the examiner many times will be surprised to note an increased tension in cases having suspicious

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symptoms, and later find that the tonometer pointed unerringly to the onset of a glaucomatous process. I personally am convinced that a persistent tension around 25 should be looked upon with suspicion, and a persistent tension of above 25 should be considered as diagnostic of a beginning glaucomatous process.

The contraction of the field of vision and the moderately increased intraocular tension usually antedates the appearance of any very marked changes that may be detected by the ophthalmoscope. However, if the physician will make a critical examination of his eye cases he will be surprised with what frequency he can detect the early cupping of the disc, even though this manifestation indicates that the disease has existed a certain length of time. The well-marked disc cupping is recognized by even the most cursory examination, and it would be nothing short of a criminal blunder for an eye specialist to overlook it.

One of the most significant manifestations is the partially dilated pupil, even though active, in a patient past middle age, but I have known that manifestation, even when coupled with a marked increase of tension as indicated by the tonometer, to be entirely overlooked by some supposedly good eye specialists, and all because the central vision was normal or nearly normal. I even have heard some eye specialists say that they hardly consider it necessary to make an ophthalmoscopic examination in refraction cases, which to my way of thinking spells as much negligence in giving proper attention to cases as to fail to do a retinoscopy. The good eye specialist and the one who comes nearest to being a success in his specialty is thorough and painstaking in all his work. He cannot be considered as doing himself or his patient justice if he overlooks the importance of using the ophthalmoscope, the retinoscope, and the tonometer in the majority of cases in which the question of vision is concerned.

So far as the treatment of simple glaucoma is concerned, I am a firm believer in the early use of miotics in the weakest strengths sufficient to keep the pupils moderately contracted. No set rule can be formulated concerning the strength of solution to be used, as every case is a law unto itself. Pilocarpin, being less irritating, is preferable, and ordinarily in the strength of one-half grain to an ounce is strong enough in the early manifestations of simple glaucoma, though this strength will have to be increased from time to time in order to hold the disease in check. It may even be advisable to switch off to weak solutions of eserine occasionally, and in my experience the latter drug is best prescribed in an olive oil menstruum.

Too much stress cannot be laid upon the importance of regulating the diets and habits

of the patient. Fatigue, worry and excitement all have a tendency to aggravate glaucomatous symptoms, and the same is true of injudicious diet and failure to secure proper elimination from skin, kidneys and bowels.

In the event that the disease progresses rapidly in spite of miotic and constitutional treatment, the advisability of instituting operative treatment should be considered. Of the various operations that have been recommended I am personally partial to the Elliott trephine operation or a modification of it in order to secure a filtering cicatrix.

Finally, the patient as well as the physician should remember that simple glaucoma means a life job for the patient, and the case should be considered accordingly.

DISCUSSION

DR. B. J. LARKINS: In making the ophthalmoscopic examination we should be particularly interested in the examination of the temporal edge of the disc and the parallaxic displacements. Sometimes by this method we can determine that we have a slight cupping in the temporal side of the disc, which will not help us in our diagnosis but will enable us to warn the patient to return for further observation and then we can use the tonometer or perimeter.

Where there is a suspicious cupping of the disc on the temporal side, without any curving of the vessels to speak of, if you use four percent cocaine, one drop in the eye and keep the eye closed; then in five minutes use another drop, you will find that you have fairly good mydriasis.

One point that I wish to emphasize is that we should make a perimetric examination as well as more careful ophthalmoscopic examination. As Dr. Bulson says, glaucoma arises so insidiously that it is often overlooked.

As for the treatment, miotics should be used at first, but I would use a little stronger solution of pilocarpin than Dr. Bulson suggested. If we start with one-half percent and then increase it as we find the case demands, that is a safe course, using your judgment in the matter.

As for the operation of choice, I believe with Dr. Bulson that the Elliott corneal-scleral trephine is the operation of choice in chronic simple glaucoma. They speak of the late infection, but I think we should take the chance. Only recently we had a case where double iridectomy had been done years before for chronic simple glaucoma. In that case the man's right eye was totally blind and his left eye practically blind. As a last resort we did a corneal-scleral trephine on his left eye first. The tension remained down, and he has serviceable vision.

We did not improve his vision, but if we can hold the vision he has we are doing the man some good.

DR. GEORGE W. SPOHN (Elkhart): I enjoyed this paper, as I always enjoy papers on this subject. I believe if this section could have a paper upon this subject read before the general practitioners in every one of the 92 counties in the state of Indiana every year, that in five years we would have fewer cases of glaucoma.

DR. BULSON (closing): My object in discussing the subject of simple glaucoma is to call attention to the fact that the disease is so often overlooked as a direct result of ignorance of the early manifestations of the disease, or carelessness in making the examinations. Perhaps I should say that in reality the paper is a plea for more care and more thoroughness in making eye examinations, whether the patient consults the physician for the adjustment of glasses or for any other reason. No examination can be considered complete without the painstaking use of the ophthalmoscope. Aside from this the field of vision and tonometric findings should be secured if there is the slightest suspicion of glaucomatous symptoms. Finally, the physician and the patient should understand that the treatment of simple glaucoma means a life-long job if the disease is to be held in check. Spasmodic efforts at proper treatment will not suffice. The patient has one more daily duty to perform, and that is using miotics and giving suitable attention to elimination and such suggestions as a competent physician may give concerning the management of these cases.

THE SOFT PARTS

A FACTOR IN OBSTETRICS*

DR. H. D. FAIR, MUNCIE, IND.

Even in this modern day, the year of our Lord 1920, every gynecologist, who so often is a follow-up man to the obstetrician, every week sees many women who belong to one of three groups: (1) Those who have some unrepaired injury due to parturition; (2) those who were injured and the repair improperly made; or (3) those who were damaged and the repair made intelligently by an honest practitioner, yet the results are not satisfactory. This condition of affairs indicates that some of us are neglecting the interests of our patients in one way or another. The purpose of this paper is to attract the attention of the practitioner who has never considered first or second degree injuries to the birth canal so seriously as he ought; and attempt to stimulate him to do better and more thorough work.

In my paper, "Better Obstetrics," read before this assembly a few years ago, I made this assertion: "Other things being equal, a young woman ought to be healthier and happier after the birth of her first baby than before." Can the majority of our puerperal convalescents be thus classified? If not, why not?

When nature designed the structure of the female pelvic floor provision was made for the accomplishment of a feat which is never demanded nor expected in the male, viz., parturition; therefore we find the former has a cleft, through which extends the vagina which during parturition is greatly distended. In spite of this anatomical break in its continuity, a woman has **the same abdominal viscera** resting on her pelvic floor as does the male, and it is subjected to the same strain from intra-abdominal pressure. Thus is demonstrated one of nature's marvels,—that this floor is so constructed that parturition is possible, leaving it firm enough to perform the functions common to both sexes, and under normal conditions, do it equally well.

The study of this structure is a lesson in architecture, and shows what a wise and provident builder our Creator is. An inspection shows that the pelvic floor is made up of the bladder, vaginal walls, connective tissue, rectum and peritoneum, and stretches from the symphysis pubis to the sacrum. We notice that the vagina cuts the floor, not perpendicular to the horizon, but obliquely at an angle of about 60 degrees. When its walls are in apposition, as they normally should be, the pelvic floor has an appearance of being unbroken, and under normal conditions the greater the intra-abdominal pressure the more firmly the anterior and posterior vaginal walls approximate and adhere to each other.

The pelvic floor is divided into two main segments, the pubic and the sacral. The former is loosely attached in front to the symphysis pubis: the bladder and urethra meeting each other at right angles are separated from the pubis by the pyramidal deposit of loose fat: the peritoneum passing from the anterior abdominal wall, just a little over the top of the symphysis, on to the fundus of the bladder.

The sacral segment is attached to the coccyx and lower sacrum, and consists of rectum, perineum and strong tendinous and muscular fibers. The inferior portion of this segment, the perineum, lies, according to text books, about one and one-half inches from the symphysis pubis, but I find this measurement is subject to marked variations, and as I will attempt to prove later, constitutes a very important factor in obstetrics. During labor this perineal body, which was previously a wedge shaped mass up to two inches in diameter, becomes flattened, its apex pressed down and back so that its structures come to lie **on the distended pelvic diaphragm**, now being a

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thin semi-transparent membranous structure one-eighth to one-fourth inch in thickness. The rectum lies to the left and rear of the pelvis and does not occlude the cavity unless containing fecal matter. The nerves are protected by the spines of the ischia and the forward dip of the pelvic floor. The sphincter ani lies between the skin and pelvic diaphragm, and is connected posteriorly to the coccyx by a ligament. The sphincter ani varies greatly in size in different women, and gapes widely in each diameter as the head descends low, thereby exposing the anterior wall of the rectum.

The pubic segment is also attached laterally to the anterior bony pelvic wall; the sacral segment likewise to the posterior bony pelvis: these two segments blending or fusing into each other on the right and left sides of the vagina, and above and below in what may be called a median raphe; this portion being least vascular and sensitive. There is an anatomical contrast in the structure of these two segments, the pubic being made up of loose tissue and is loosely attached to the symphysis pubis, while the sacral consists of dense, strong tissue and is firmly dove-tailed into the sacrum and coccyx. During labor the pubic segment is drawn up and the sacral segment is drawn down. This action has been likened to that of folding doors, as one passes through pulling one to him while pushing the other away. In other respects its similarity to the action of the iris diaphragm on our microscopes is just as evident.

From and because of the particular arrangement of the pelvic floor we find a definite opening up only during parturition, or when a woman assumes the knee-chest position with the vaginal orifice up, or in connection with hypertrophic changes in the cervix or adjacent tissues.

It is more nearly correct to speak of the separation of the two segments than of the vaginal wall being apart, for the vaginal walls are not special structures but are analogous to the edges of the two folding doors. The retropubic fat and the peritoneum over the bladder is movable, while the peritoneum over the sacral segment is fixed.

The projectability of the pelvic floor is about one inch. The distance from the coccyx to the fourchet in a pregnant woman averages two and one-fourth inches, and during the acme of expulsion this dimension is increased to five or more inches.

The structures most frequently damaged during delivery are the levator ani muscle and the fascia covering its upper and lower surfaces. Rarely the coccygeus is torn. Another set of muscles of little significance in labor is the transverse perinei, but following even a slight laceration they play the mischief by tending to keep

the edges of the wound separated when the rent goes unrepaired.

A few years ago I awakened to the fact that I was getting an occasional tear when the size of the fetal head, age of the mother and conditions in general apparently did not warrant such an accident. On the other hand, in some cases where I fully expected considerable trauma the patient remained uninjured. Finally an anatomical peculiarity in one of my patients led me to undertake a series of investigations. With the help of my regular assistant I measured the distance from the inferior edge of the symphysis pubis to the fourchet and on to the anus in one hundred nulliparous patients who came to the office for treatment. By an ingenious device this was accomplished while the patient was being treated, and without her knowledge. To my great astonishment our record shows that this measurement varied so much as one and three-fourths inches. Just consider, for a moment, what a factor this is in obstetrics. The head must pass under the pubic arch and over the fourchet, and it makes a significant difference whether the original distance between the two points is three inches or only one and one-fourth inches. It is self evident that a vulva attached high on the pubis is subject to severe parturient trauma while with the opposite anatomical formation a head twice the circumference may pass without laceration. With this fact before us we ought to be able to anticipate and estimate, in nearly every instance, just how much damage we may expect. I always anticipate a tear of the perineum when the anus and particularly the area posterior to the anus bulges before the vulva begins to gape.

The word "damage" naturally suggests repair, and I have a few words I wish to say regarding methods and results. On several occasions, after doing what I considered a good job, I failed to get union by first intention, and in some instances the patient received no benefit from my attempt. One of my friends, when discussing the matter, said that he always succeeded in getting good results, so I concluded that something was wrong with me or my technique, and I set about to discover what it was, and my findings are here presented.

In the first place, my idea of the structural arrangement of the fascia, muscles and their attachments that go to make up the pelvic floor was vague and incomprehensive. I, together with many others, as I have since learned, thought all damage was apparent, and that a stitch or more conducing to a fairly cosmetic result constituted essential repair work. I paid but little attention to trauma occurring anywhere except in the median line. In the second place, I discovered I was not using the proper material for sutures. My stitches did not hold

long enough to insure safe union. I did not recognize the importance of this little transverse muscle previously mentioned. In the third place I was using too elaborate dressings and meddlesome after care.

Today I am getting much better results. I try to repair damage wherever along the parturient canal that damage may occur. I try to suture muscle, fascia, skin and mucous membrane in their proper order and relation to each other. I use at least a ten day cat gut, preferring small sizes which demand less effort on the part of the tissues to accomplish its absorption or disposal. When a crown or retention suture is needed I use silk worm gut, leaving the ends long. I apply no dressing whatever following either a primary or a secondary perineorrhaphy. The perineum is not washed nor cleaned with a cloth nor sponge but is irrigated by a spray poured from a pitcher or irrigating can.

In the fourth place, I had been drawing my sutures too tightly. This not only interfered unduly with circulation of blood into and through the tissues but added to the discomfort of the patient. Coaptation without constriction is sufficient. We must also bear in mind that the tension on the perineum while the patient is in the lithotomy position differs materially from that when the legs are extended.

I formerly considered the secondary repair a more difficult operation than that of primary suture, but now I know it takes more skill and patience to properly care for the immediate needs of a damaged parturient canal, and to put the patient in a condition where she may become practically good as new.

Even the careful surgeon using the best skill at his command, confident in his materials and methods, may have unsatisfactory results, for many things can happen to modify the effects of his work and counteract the ends expected to follow his faultless technique; for these things he may be in no way responsible nor have any knowledge of their existence.

Suppose we are in attendance upon a primigravida at full term with a fetus weighing eight pounds or more, and we are able to recognize the fact that the vulva is attached high over the pubis, that a tear is imminent and that the usual methods of attempting to protect the perineum will be useless (I use the word "attempting" advisedly, for in a given case corresponding to the above, all efforts toward preserving the integrity of the perineum are attempts only; they never succeed), what is the reasonable thing to do? Episiotomy is the answer. A difference of opinion exists regarding the technique and the line of incision, but as the median raphe is the point usually selected by nature for enlargement of the vulvar orifice, and as it is the least sensitive and vascular area, it seems

to me that less damage is likely to be done with a median incision than by any other. Repair is certainly easier and results, in my experience, have been more satisfactory than when the lateral and slanting incision was used. As to the advantages of a clean cut straight wound over a ragged tear with numerous ramifications, there is no room for argument.

For the purpose of this paper the uterine cervix is included in the "Soft Parts". I firmly believe that many deaths from post partum hemorrhage have occurred when the blood did not come from the placental site. Twice during the last year I was called to assist in stopping post partum hemorrhage where the trouble was purely cervical, yet in neither instance was the attending accoucheur aware of the fact. In one instance the patient was nearly exsanguinated and would have died in a few minutes. So soon as I had fixed both edges of the torn cervix within the grasp of a vulsellum the hemorrhage immediately ceased. One of these physicians who had been doing obstetrics for thirty years had never taken a stitch in a cervix, and had no suture material with him.

I believe every physician doing obstetrics should be capable of doing the necessary repair on the cervix and have the materials on hand ready for prompt action.

DISCUSSION

DR. F. R. CLAPP (South Bend): I do not know of any subject in obstetrics which is so important, and the ultimate results so far reaching, as the subject Dr. Fair has elected to present. If we are to accept the statement of Williams, that 40 percent of all women who go through childbirth are, to a greater or less extent, rendered physically deficient, I do not know that we can take up and discuss a subject that ought to bear more fruit than this particular one. I wish to congratulate the doctor upon the way he has presented the subject. It is very largely a subject of anatomical conditions and the process of labor. I believe that we have had heretofore a very vague idea of what occurs to the soft parts or the physiology. We have taken into consideration very lightly all those things that go into what we call the mechanism of labor. If we will consider for a moment the pressure exerted on the pelvic floor during labor it will be easy to imagine how all degrees of trauma may result. I believe that many of the most frequent injuries to the soft parts are unrecognized. It is not necessary for a patient to have an apparent laceration, one that we can see, on account of the dilatibility of the vagina and the non-dilatibility of the tissues that constitute the pelvic floor. We do, very frequently, have rupture of these non-dilatable structures, and these injuries are only recognizable late, during the post-partum period.

We are unable to see them at the time rupture occurs and it is only after the period of involution is completed that they are recognized.

I wish to call your attention to the fact that those men who are doing obstetrics should make a routine examination of their patients six weeks post-partum, and make not only a vaginal examination, but a rectal examination, which I consider more important. I do not believe we are able to determine anything very definite by a vaginal examination alone. In the cases where the pelvic floor has been injured, with the finger in the rectum it is easy to turn the vagina inside out and so reveal any injury. In the lithotomy position those structures which produce a sphincter-like action of the vagina tissues permit gaping when lacerated. The woman whose pelvic floor integrity has been maintained will have a perfectly closed vagina when she is in the lithotomy position. These things can be determined by a glance. I think we will find in more cases than not, in 50 percent at least of the cases that have suffered birth injury, that repair has been incomplete or imperfect.

The doctor very lightly touched upon the subject of episiotomy. It has been my custom in the last two years to do a routine episiotomy in all primiparas. With that method and with prompt repair afterward we can make those women what I term "re-primiparized". We can put them in the same condition as before delivery. I disagree with the doctor in regard to the method of episiotomy he used. He makes a central incision but I very much prefer a lateral and a wide one at that—large enough to take care of the oncoming head. The size of the wound makes very little difference, no more than the abdominal wound in a laparotomy. The method of closing this wound is also important, and I have tried to find a method which is serviceable for all cases. I have used interrupted and continuous catgut, silkworm gut on the skin surface, with silkworm gut as anchor sutures, until I have arrived at the conclusion that we must treat the episiotomy wound just as any other surgical wound, and this it is. It is the same as any wound in the abdomen and should be treated in the same manner. My method of closure is now just the same as in a laparotomy wound, using an interrupted suture to bring the muscle into apposition, an interrupted plain catgut, then the fascia is closed by a ten day chromic gut, anchor sutures are placed, and for the skin I use the skin clips. This method has served me better than any other and I think I have tried them all.

The doctor spoke of only the incomplete repair of the primary process. I think this is due to the fact that we do not take into consideration

the anatomic structures we are dealing with. These tissues must be brought together according to their anatomical structure, the muscle edge to edge, and fascia to fascia, just the same as any other wound in any other complex tissue.

I think the great majority of men who are doing obstetrics do so because they are compelled to do so rather than from choice. The sooner obstetrics are taken seriously the sooner we are going to get results. Men are going to take this work up as a specialty and it certainly deserves it. Our women, the mothers of us and the mothers of our children, have not received the attention they deserve, and our daughters who are coming on to be the mothers of our next generation will receive much better attention during their childbearing times than those who have gone before them.

DR. A. M. MENDENHALL (Indianapolis): In entering into the discussion, simply because Dr. Clapp spoke of 40 percent of the women being injured, I would say that Dr. Polak says that 90 percent of all full term primiparous labors results in damage to the perineum. He goes further and says that some 10 percent cannot be repaired at that time as there is no open wound. Therefore, an episiotomy is the thing in the 90 percent. He finds an occasional primiparous labor in which he feels that the vagina will permit the passage of a full term child, but he advises and is routinely doing the episiotomy for the full term primiparous labor. If you have a small baby, this statement will not apply. The feeling is, by Dr. Polak and others, that they can make a better repair by episiotomy than with a lacerated perineum. With this astonishing fact presented to us it is perfectly obvious that this matter deserves a good deal of attention, and Dr. Fair is to be congratulated for bringing up this subject, old as it is, for our discussion.

The cervix is one of the most serious obstacles we have to deal with in many labors. We can meet contracted pelves by many different methods, but in many cases a cervix will not properly admit forceps or version and no man doing conservative obstetrics wants to do a Cæsarean section for a rigid cervix. However, you will find occasionally a cervix which will not dilate; you try to dilate it manually, put in a finger and dilate it up to three or four fingers, but find a heavy ring of cervix still remaining. I think the cervix should be included in a discussion of this kind as one of the important parts.

Dr. Fair brought out the question of unobserved lacerations, or damage which cannot be seen. Unquestionably a great deal of damage is done that could be seen if it was looked for. If a proper speculum is put in and the patient

placed in the proper position a great many of these injuries will be seen, but many cannot be found even with a speculum. In other words, there is separation of the muscle fibers without any damage to the mucosa, or any damage to the skin, which falls right in line with Dr. Clapp's discussion of episiotomy.

The choice of the episiotomy I would not like to discuss at this time because there is not sufficient time to enter into it, but the facts are that the obstetrical profession is about equally divided as to central and lateral. Personally I prefer the central, probably because I have performed thirty-five or forty central episiotomies and only about seven or eight lateral. I believe that episiotomy is not being done nearly often enough, and I am glad to have the opportunity of discussing it.

I also congratulate Dr. Fair on his statement that it is much easier to do a secondary perineorrhaphy than an immediate repair. Many more men can do a nice, clean perineorrhaphy than an immediate surgical method. The primary perineorrhaphy has to be a repair of the damage done, whatever that is. You cannot say you are going to do a Mayo or any other special method, but you are going to repair the damage done. The coaptation is the thing, and I like to use absorbable catgut in my perineorrhaphy. I think no man will get a good perineorrhaphy by putting a through and through suture of the skin, muscle and all. He should coapt the muscle and repair the skin afterward; the muscles must be coapted in a deep wound, and we can later close the skin. I think the perineorrhaphy done in three layers is better than to do it all at once and have an apparently perfect perineorrhaphy, but in reality a very poor one.

DR. H. D. FAIR, Muncie (closing): I would like to say a word or two more regarding the incision. Last Spring I spent some time at the Chicago Lying-In Hospital with Dr. DeLee and his assistants, and I asked them why they did not do the central instead of the lateral episiotomy. Their answer was this: if you make a central incision and there is a greater tear, it will go on down and perhaps through the sphincter ani; if you have a lateral incision it will go off in a lateral direction and do no harm. One of the men who was doing much of the operative procedure had not done a central. Most of the men who are objecting to the central incision do so because they have never used it and they are objecting on theoretical grounds. If you use it I feel certain you will like it.

OBSTETRICS IN GENERAL PRACTICE*

DR. A. M. MENDENHALL
INDIANAPOLIS, INDIANA

It is a quite generally accepted fact that obstetrics as practiced in connection with general medicine is very often not only unsatisfactory as to results obtained but quite frequently fails to satisfy even the man who is practicing it. In other words, more and more general practitioners are coming to realize that to practice obstetric case and get better results, and in turn for the time they are able to give and with the compensation they are able to demand. With these physicians there are but two alternatives—either give more time and care to each obstetric case and get better results and in turn for such service demand adequate compensation, or give up obstetrics entirely. To adopt the latter alternative would be deplorable, as a large number of physicians who are practicing the better obstetrics would simply be dropping a service they owe to the community, thereby leaving their clientele to the mercies of more inferior men. Rather to be preferred is that those general practitioners who know that obstetrics should be elevated to a higher plane (and there are many who feel it) should never tire in their efforts to bring about a more universal feeling among the laity as well as the profession that pregnancy, labor and puerperal conditions are deserving of far more consideration than they generally receive, and that just as soon as these facts become more perfectly realized just that soon will there begin a marked reduction in the morbidity and mortality connected with the child bearing process. And along with this will come the realization by the laity of the truth of the old adage, so well established with obstetricians, that the patient who pays the smallest obstetric fee is usually cheated the worst.

There is no longer any reason why the man who is trained in anatomy, physiology and general medicine and surgery should consider and handle a case of obstetrics as though it were a normal and physiological process that needs but little or no care. There are 15,000 or more deaths in the United States every year due to obstetrics. Eighty to ninety percent of these deaths are preventable. Tuberculosis alone kills more women of the child bearing age. What woman may have been in her early days of evolution, and what the childbearing process may have been in the early days of the race, need not enter into this discussion, for we do know that leading obstetricians the world over (notably DeLee, of Chicago, and Polak, of Brooklyn) are continually trying to establish the fact that the average pregnancy and labor

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are distinctly pathological. If we need further evidence that it is not considered pathological let us offer a pregnant woman to some of our leading insurance companies for life insurance.

Accepting the fact that if not always pathological it is at least fatally so in 15,000 of our women yearly, would it not be well to consider a little more seriously that any pregnancy, labor or puerperium may at any time become distinctly abnormal? With this in view there should first of all be greater effort made to get the pregnant woman to engage her physician earlier. It is by no means difficult for any individual physician soon to get the fact widely disseminated among his clientele that he desires an early engagement for all his obstetric cases. Then he makes his general physical examination, blood pressure and urinalysis with sufficient care at least to detect gross abnormalities of the lungs, heart or kidneys. Periodic examinations of the urine as to specific gravity and albumin, and occasionally for sugar, ought to be routine practice. Too much dependence must not be placed upon urinalysis. Women may and do go into eclamptic convulsions with their urine normal or practically so. Therefore, the practice of having the urine sent to the office is not to be commended.

It is far better to see the patient in regard to edema, headache and other symptoms, but most of all for the purpose of taking her blood pressure. Practically always a grave toxemia is anticipated by a steadily rising blood pressure. A fairly high pressure often is less alarming than a lower one but one which has been steadily rising. Hence with the combination of urinalysis and blood pressure takings we will very rarely, if ever, be called unexpectedly to see our patients in convulsions. And what is better still we will have anticipated this calamity and in most cases be able to prevent it.

Most of our recent graduates in medicine start out thoroughly impressed with these facts but soon begin to neglect them, the reason often being that they may conscientiously carry out this practice on a comparatively large series of cases and never find a case of albuminuria and casts nor high blood pressure, and therefore they decide it is too rare to be worth the effort. But the point we wish to establish is that we should always be looking for this rare occurrence if we choose to call it rare. If we carefully follow up 99 cases before we find an approaching eclampsia, and our hundredth case is of this type, and we have discovered her while our chances of saving her life are about 98 percent instead of after her convulsions start and she is in a 25 percent mortality class, haven't we been repaid for our efforts on the other 99? And this is leaving out of consideration the increased chances of securing a living child. My

last two cases of eclampsia were each excellent examples of improper prenatal care. In one instance the patient had failed to report to her physician for three weeks, during which time she was rapidly becoming edematous, having severe headache, vertigo, disturbed vision and insomnia. The other had not had her blood pressure taken at all, as her physician thought he could depend upon urinalysis alone.

Next to routine examination of the urine and the blood pressure readings probably should be mentioned pelvimetry. The writer is well aware of the many pelvic measurements that may be more or less accurately taken and that are of some value, and that it requires a little extra skill to make a very accurate and complete pelvic measurement. Nevertheless we do maintain that every man doing obstetrics should be able to measure accurately the external conjugate, which is much the most important external measurement in nearly all cases; and he should know that 20 or 20½ cm. is the average and that under 17 or 18 cm. he should at least be placed on his guard. There are other important external measurements but we wish here only to emphasize the external conjugate.

Then a most careful vaginal examination should be made prior to labor to determine gross abnormalities and to determine whether or not the promontory of the sacrum can be reached, and if so the length of the true conjugate. Having once decided we are dealing with a small pelvis we can much more wisely choose our future course of action. We will, at least, make fewer vaginal examinations after labor starts, and better preserve our patient for operative procedures if they become necessary.

And this leads to the question of vaginal examinations. Whether we can always get the desired information by rectal examinations, and, if not, when shall we make a vaginal examination need not be discussed here further than to say that far too many vaginal examinations are being made, and that very often even an abdominal examination is all that is indicated. Many men are very skilled and proficient in rectal examinations, and rarely make more than one if any vaginal examination after labor begins, and these men are of course reducing their infected cases down to very small numbers. The records of our large maternities go strongly to show that sepsis increases in proportion to the number of vaginal examinations made during labor.

It always should be borne in mind that a great deal of information may be obtained by abdominal examinations during labor, this being especially true of cephalic presentations. Very frequently in the slightly contracted pelvis, and of course always in the absolutely contracted pelvis, the head may be felt above the pubes, and

in all such cases we are quite sure delivery is not imminent; hence repeated vaginal examinations are not only quite needless but are especially contra-indicated because such a case must always be looked upon as much more likely to become a Cæsarean or other operative delivery. No harm can come from as frequent abdominal examinations as desired, and it often takes but a moment to palpate the fetal head still riding upon the inlet, and this should act as a danger signal toward further vaginal examinations, at least if one thorough one has been made previously. If we decide upon a vaginal examination during labor it may often give us a little information that may be quite difficult to obtain by rectal or abdominal examinations. Usually the rectal examination will tell us the degree of dilatation of the cervix, but in a few instances we may not be entirely satisfied upon this point.

Likewise as to the membranes—we may or may not be able to determine whether they have ruptured, and if it is especially desirable to establish this fact, a vaginal examination may have to be made. Then finally one vaginal examination is often necessary for an accurate determination as to presentation and position. Granting the possible necessity for one vaginal examination, then to determine these important questions it is to be recommended that every effort be made to get further and subsequent information by suprapubic and rectal examinations, always seeking first for a real indication for further vaginal examinations.

It seems only necessary to mention in passing that every parturient woman is entitled to the additional safeguard which is bestowed upon her by the proper use of rubber gloves and very careful aseptic and antiseptic technique.

Back so long ago as 1843, long before we understood bacteriology and infections, our immortal poet and medical writer, Oliver Wendell Holmes, strongly warned against a physician jeopardizing the life and health of a woman "by traveling direct to her childbed from cases of puerperal sepsis, post mortems, erysipelas, etc., before he had practiced thorough ablation and allowed an interval of time to elapse." In his own terms this was "in the highest degree inexpedient". With all our modern knowledge of these subjects we are falling very far short of our duty whenever we fail in any manner to surround, as completely as possible, every parturient woman with our best safeguards against infection. We must contribute just as much as possible toward reducing the appalling number of 6,000 deaths annually due to puerperal sepsis.

Whether or not all obstetrics should be done in the hospitals and maternities, there seems no

argument except to the effect that a very large number of women are not located where hospital facilities are available. The ordinary obstetric case should be considered as distinctly a surgical procedure, and in view of the fact that few surgeons any longer operate in the private homes, neither should a delivery be conducted there when hospital facilities are at all available, and in localities where they are not available we should lend our influence toward their establishment. There are many emergencies and accidents that may and frequently do happen during labor which can be far more safely handled in a hospital.

It does not seem profitable in the time allotted to me here to take up any of the complications in detail, but I desire to suggest just a few specific things, and the first is eclampsia treatment. Whether or not we belong to the enthusiastic supporters of the morphine treatment, the incontrovertible fact remains that a few large doses of morphine to the eclamptic patient being cared for in her home and by the general practitioner is the best possible single procedure to be undertaken. Also a great many patients who are fighting and resisting their first stage pains, and in addition have a cervix that is more or less rigid, are greatly helped by a hypodermic of morphine.

Pituitrin is a valuable oxytocic, but is being greatly abused not alone by the general practitioner but by a few obstetricians. Pituitrin cannot reduce the disproportions between the passage and the passenger. When the contractions are already strong and frequent, pituitrin is to be avoided. Except in very rare instances it should not be used until the cervix is dilated.

Lastly I would sound a word of warning against depending upon vaginal tampons controlling uterine hemorrhage, and especially if the hemorrhage be due to placenta prævia. Cervical packing supported by firm, careful vaginal packing is much more to be depended upon.

In conclusion let us accept two facts: first, that there is still ample opportunity for obstetrics to be practiced better by all of us, whether as a specialty or in connection with general practice; and, second, that at present and in the near future at least a large percentage of this work must of necessity be handled by the general practitioner who only has recourse to the obstetrician in the grossly abnormal cases. Accepting these two facts, it is to be recommended that obstetrics be given more serious consideration, and that an heroic effort be made not only to reduce our very unnecessarily large mortality but also to reduce the very much greater but less often mentioned morbidity figures.

THE ACUTE ABDOMEN*

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The high mortality rate in dealing with acute conditions of the abdomen should command our earnest consideration.

I believe it safe to say that the cardinal symptoms of acute abdominal crises are pain, tenderness and muscular rigidity; however, the surgeon should consider the "*facies presens*", the nervous temperament of the patient, the color of the lips, the stability of the pupil, the tension of the pulse, the body temperature, the skin, whether sallow and cachectic or harsh, dry and wrinkled, whether it is bathed in clammy perspiration or pink and elastic. He should note the respiration, whether it is deep and laborious or shallow and jerky, or if it is of Cheyne-Stokes type. He should note the contour of the abdomen, whether symmetrically round and plump, scaphoid or much distended. If the patient has vomited he should note the character of the vomitus, whether bilious, bloody or ster-corraceous. If the urine can be obtained he should ascertain if it is clear, cloudy, purulent or bloody. The feces should be examined and a differential blood count made if facilities are at hand. A syndrome gleaned from these symptoms should form a basis for active procedure.

Pain is a usual symptom in acute perforations of the gall bladder, anterior wall of the stomach, of the appendix or any portion of the intestinal tube unless it be from typhoid ulcer or from crushing wounds lacerating the gut or rupture of the viscera by heavy vehicles crossing the abdomen or from heavy blows or crushing accidents thereby desensitizing the nerve endings. In typhoid fever there is present a low grade of inflammation causing desensitization of the nerve endings or nerve trunks from toxemia or nerve block. The intestinal tube has been known to be entirely severed by a blow on the abdomen or by a vehicle passing over it, impinging the gut against the spine, followed by little or no pain. Referred pain occurs in the abdomen from acute pleurisy or ectopic rupture. Severe pain comes from gall stones passing through the common duct, renal calculus passing through the ureter, torsion of any segment of the gut or intussusception. Various types of pain prevail in these conditions. The sharp cutting or agonizing pain in biliary, renal or appendiceal colic, gripping pain in intussusception or torsion of the bowel, and pain more or less of a sickening nature in stab wounds, penetrating wounds or gunshot wounds.

Tenderness is a more positive diagnostic symptom of the acute condition present. It is,

however, misleading often because in general peritonitis the tenderness is diffused and not localized over the lesion. In ruptured ectopic gestation often the entire lower abdomen is tender, and the same may occur in ruptured appendix. The entire upper abdomen may present tenderness from cholecystitis, from perforation of the gall bladder or stomach, or from rupture of the liver or spleen. Tenderness of the right rectus in the superior quadrant directs our attention to the gall bladder, duodenum, lesser curvature of the stomach, pancreas, hernia through the foramen Winslow, lesions of the liver, ascending and transverse colon. If it be in the lower right quadrant intussusception, appendicitis, kinks from Jackson's membrane, adhesive bands about the cecum, renal calculus, torsion of the kidney, strangulated hernia and inflammations rising from the pelvis should be considered. Tenderness in the region of the umbilicus is found in umbilical herniæ, appendicitis, volvulus and in rare instances calculus formed in a patulus uracus.

The last condition once came under my observation. A young man twenty-three years old developed an induration and acute inflammation around the umbilicus, a slight purulent and watery discharge began. The tenderness and induration became as large as the palm of the hand. The patient was extremely nervous and prone to a good deal of abdominal giration. In one of his paroxysms he raised himself up quickly in bed and a stone the size and shape of a large mulberry burst from his navel and struck the foot of the bed in which he was lying.

Tenderness along the left rectus may be due to rupture of the spleen, ulcer of the stomach, acute pancreatitis, ulcer of the descending colon and sigmoid, volvulus of the sigmoid, renal calculus and acute inflammations arising from the pelvis. Either rectus may be tender and somewhat rigid from inflammation within itself or transmitted from the thorax over the thoracic nerves.

Rigidity or hyper-rigidity of the recti muscles is pathognomonic in all acute conditions of the abdomen. Its presence is nature's method to stay or splint the underlying injured or inflamed peritoneum.

Pain, tenderness and muscular rigidity means peritonitis and if it is localized operative interference is demanded. If it is general as in acute fulminating peritonitis I believe a sane, sound surgeon, characterized by Crile, can elect the incision which will save many lives that would be lost by delay. The masters of surgery who have large hospital facilities with well organized staffs are prone to become lax in their diagnostic acumen and are somewhat lost when

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called to diagnose and operate in other surroundings than their own.

The axiom of W. J. Mayo to get in quick and get out quicker should be followed. An incision made over a ruptured appendix with acute general peritonitis cautiously lifting up the cecum and appendix and by ligation and removal, if done in a delicate, rapid manner, is sane, sound surgery. The peritoneum, both visceral and parietal, are usually dark red, highly inflamed, friable and easily traumatized. Rubber covered gauze packs should be used if any. Evisceration and exposure to the drying influences of the air or permitting the bowel to lie on the surface of the abdomen which has not been well cleaned of antiseptics used in sterilization is pernicious practice. A very soft rubber drain inserted and closure made will often turn the course of septic material from the abdomen and bring about a sudden localized condition that will establish convalescence at once. Too much is done oftener than too little. Conservatism should be the balance wheel in all radical operations.

Regulation as carried out by the Lankenau Hospital, complete anatomic and physiologic rest in the absence of reliable history or reasonably sure diagnosis would be good judgment to follow if patients were always confined in hospitals, but such is not the case, and we must do our best often in the most meagre surroundings. Thrice in my experience I have been called to open the abdomen when extreme catharsis had been the underlying cause or had aggravated the condition. One case, a robust farmer, thirty-five years old, had been to the country village on Saturday evening and had eaten a large amount of peanuts. In the later hours of the night he was seized with acute abdominal pain which continued until the family physician was called. A hypodermic injection of morphia one-fourth grain was administered followed by two compound cathartic pills. The next morning two more compound cathartic pills were given and 2 ounces of castor oil. Vomiting began and continued until eructation of dark brown matter having a fecal odor persistently kept up. High colonic flushings were then employed by the two physicians in attendance. Finally, when all these efforts to get the bowels open had failed, I was called at 2 p. m. on Tuesday to hurry relief. The history was obtained and "*facies presens*" considered. The face was pinched and the expression anxious; the sclera was dull and pupils unsteady; the pulse was intermittent and feeble; the abdomen was distended and rigid. On palpation a mass could be detected about 6 cm. to the right and slightly below the umbilicus which was easily movable to the extent of 4 or 5 cm. in all directions. The abdomen was opened through a right rectus

incision six inches in length, 600 to 800 cc. of light amber colored fluid escaped and a mass of entangled coils of intestines presented. Numerous dark bluish spots could be seen on different coils of dark red bowel surface. The coils were adherent to each other in many places and separation was carried out with a great deal of difficulty, necessitating the tearing of the muscularity of one loop for a distance of about 2 cm. The rent was grasped by rubber covered bowel forceps which seemed to pinch into the friable thickened bowel to such an extent that they were released and the assistant attempted to grasp it with his gloved fingers until separation could be completed. The over distended bowel loops began to turn about to equalize the gas and contents within when suddenly a spurt came between the assistant's fingers and fully a pint of finely ground peanuts in a fluid medium flowed over the bowel and down into the peritoneal cavity. A gallon pitcher of hot saline solution was used to toilet the bowel and abdomen as best I could, being careful to allow the fluid to enter the spaces filled with debris only. At no time was the fluid agitated in the spaces filled with it, neither was the abdominal wall lifted to allow the fluid to enter spaces unsoiled. I consider such practice as usually bad but in this instance it was cautiously employed. Owing to the extent of gut involved with the dark bluish spots, probably two feet in extent, resection was deemed too hazardous. A double purse string suture of 40 day No. 1 cromatic gut was passed around the perforation and edges tucked in, care being taken to see that the bowel current was not obstructed. The abdomen was then closed in the usual manner with a very soft rubber drain inserted in the lower angle of the wound. The patient left the table in good condition. Vomiting ceased and the next morning his condition still showed improvement. A moderate amount of light amber colored fluid came through the drain the following day. At the end of 48 hours all symptoms were favorable and the drain was removed. The following day a message came that the patient was delirious. He had been given beer and other dainties without my directions. Needless to say the temperature had risen; the pulse had again become irregular; death followed 24 hours later, which was 72 hours following the operation.

Another case was that of strangulated hernia reduced *en masse*, followed by catharsis, perforation of the ileum and general septic peritonitis. The perforation was repaired and a soft rubber drain inserted. Five days later a fecal fistula developed. The patient was aged and feeble and died at the end of 14 days.

Mrs. A. E. B. had passed her 12th week of gestation when she attempted to commit an abortion by drastic emmenagogues. When an

examination was made she had an immense appendiceal abscess in which the coils of the ileum were incarcerated. Drainage was instituted through a right rectus incision with complete recovery and normal delivery at the end of gestation period.

In conclusion, I believe that every acute abdomen that presents the cardinal symptoms set forth in this paper, *i. e.*, pain, tenderness and muscular rigidity, should be opened unless it is clear that they are referred or that they accompany a constitutional non-surgical condition, such as *tabes dorsalis*. The mortality rate is in direct proportion to the time between the beginning of the acute lesion and the time of operation. Untimely operations are usually made under stress of circumstances or when the moral courage of the surgeon is at low ebb.

The sixth sense, "horse sense" (Deaver), common sense should be our guide in what to do and how to do it.

DISCUSSION

DR. J. C. FLEMING (Elkhart): I am reminded of a very interesting case of acute abdomen I saw within the last week. A woman in the neighborhood of forty-five years of age was taken very suddenly on the street with intense abdominal pain. She was carried to a physician's office in partial shock and in great distress. A hypodermic of morphine was administered and she was sent home. She improved for a little while and then there was a recurrence of the pain and a spot was localized pretty well in the right side of the abdomen which the doctor concluded was appendicitis and operated. He realized when he removed the appendix that that was not the whole pathology, because the cecum appeared unusually pale and the blood vessels looked peculiar. He put in a drain and about four or five days later about ten inches of the cecum came out of the abdominal wound in a slough and about two-thirds of the ascending colon sloughed away. The patient undoubtedly had an embolism of the mesenteric artery. She then was in a condition where she was discharging the entire contents of the bowel into the abdomen, running a temperature of 105 degrees, with a pulse ranging from 120 to 130. They waited four or five days, but the patient continued to grow worse and when I saw her in consultation we thought there was no chance unless we could stop the fecal current from going into the abdomen, so we went into the median side of this large fecal fistula and dissected the ileum, anastomosed it onto the transverse colon, then closed the distal end of the ileum and also closed the end of the transverse colon; but the patient succumbed in

about twelve to fifteen hours. But the interesting part of the case was the pathology, that is, the occurrence of the embolism in the mesenteric artery.

THE PHYSICIAN

SOME MEDICAL QUESTIONS WITH A MORAL BEARING*

BY FRANK B. WYNN

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With perhaps a majority of the medical profession, tradition, custom and conviction have led to an attitude of negation so far as moral advice to patients is concerned. There will always be those who in personal contact with patients, hesitate to discuss their moral delinquencies through charity and sympathetic tenderness for those who have erred. Recognizing the universal weakness of human kind they recoil at the thought of wounding sensitive feelings. They recognize always the possibility of mitigating circumstances, which might in part excuse the lapse. Their view that patients do not like to be preached to by a doctor is correct, in most instances. Bungling attempts to regulate the moral life of patients is very likely to make the physician *persona non grata*. Then there is the ultra-scientific group, following standards so high that they demur at dropping to the common level of giving moral advice. A few there will be who through fear of losing cases will ignore moral phases of instruction. The average practitioner is likely to say: "Let the minister perform these functions. Our duty is to heal the physical body."

The educational and sentimental tendencies of the age scotch this old doctrine of *laissez faire* concerning medico-moral questions. Modern progress no longer permits us to shut our eyes or stop our ears to the appeal of immoral facts, observed in the practice of medicine, when it lies within our power to correct them. True, frail human beings will suffer, fail and fall, leaving the fit to survive. The successful gardener finds it necessary to not alone destroy the pests which infest flower and fruit; he tills the soil, plucks out the contending weeds, fertilizes the weaker plants, supplies water when drought threatens—all to the end that a fruitful crop result. He calls to his aid every agency which protects, enriches and brings results. Is man less important than the vegetable kingdom? Should the gardener have a broader grasp of duty than the physician? We may lazily settle ourselves and coldly observe: "Let the unfit perish. They

*Fourteenth of the series of articles by Dr. Wynn appearing regularly in THE JOURNAL.

are not worth the saving." Such is the unsympathetic mandate of evolution. Not a few physicians succumb to its cold, benumbing influence upon them. Fortunately for mankind there are more who view life as a sacred spark, which must be kept aglow by every means in our power. This heroic spirit, true to the divine fire of life, looks upon man as a tripartite being—having a physical, mental and moral side. The purpose at this time is to discuss some of the moral phases of medical practice.

Of the medico-moral questions coming to the fore in our own day none has occupied a more conspicuous place than the venereal disease problem. Preventive medicine has dared to force the issue in the face of an opposing professional conservatism. The plan of attack has been to bombard the fortresses of professional secrecy concerning the social evil; to lay bare the horrifying facts and consequences of venereal disorders and syphilis. It was a tremendous shock to professional propriety but was necessary in order to gain the attention and cooperation of the ignorant, who are moved more by fear than persuasion. However successful such propaganda may have proved with the ignorant, amongst those of neurotic and hypersensitive make-up, the effect has often been to engraft a phobia. Here then growing out of the method of the day, is a high moral duty incumbent upon both public health workers and practitioners, to guard the neurotic from becoming a victim of his fears. Thoughtless words, inaccurate and incomplete methods of diagnostic procedure, may develop in him a psychosis harder to bear and more difficult to cure than syphilis itself.

Leading toward the venereal peril is, of course, the sex-impulse so often driving the individual to calamitous acts. It is Nature's way of insuring perpetuation of species—a sort of physiological storm which may strike the individual unawares, causing confusion and disorder in his power of self-control. Has medicine done its full part in the world in teaching people how to avoid or seek safety in these storms? This is a newer phase of preventive medicine to which more and more attention will be given. What stock raiser in these days of wonderful achievement in that field, will permit the miscellaneous mixing of immature male and female animals? He knows quite well the result will be undue sex-stimulation, the stunting of both sexes, early failure of procreative and breeding power, and in the offspring a less perfect animal. All this we know, but in the case of human kind we not only ignore the facts but go contrary to their teaching.

In illustration note the social customs of the age. The fashionable mother in urban life forces upon her children a premature consideration of sex questions. Children are sent to dancing

school and parties presumably to learn grace in movement, and the courtesies and formalities of conduct in so-called good society. In reality, the chief experience gained is a byproduct—the awakening of the sex impulses before the best interests of the body, mind and spirit warrant their aggressive and dominating activity.

Historical review tells us of the austerity of the Puritans and the severity of the Methodists and other sects in the separation of the sexes. There were the schools for boys and the schools for girls; and the sexes were separated in the churches. Feminine modesty and reserve was the subject of poetic exaltation. How changed is all this! Custom and fashion now permit free mingling of the sexes in church, school and social life. Instead of the austere and repressive measures of the olden days, all forces seem at work to stimulate social contact of the sexes irrespective of age. From sex-separation and severity the pendulum has swung to the opposite extreme of sex-worship. The flower of sex-modesty which flourished in former days has been wilted in our own day by the consuming flame of sex-passion. A morbid public appetite has been created which demands for its satisfaction sensuous demonstrations. The motion picture and playhouse present salacious climaxes with most realistic effect. Thus are children and youth inducted into dangerous fields—their sex-inquisitiveness aroused and their imaginations fired by pictures which lead them into evil paths.

In high schools and co-educational colleges it is considered quite the thing for every boy to have a girl. The familiarities of social relationship are rather shocking to proprieties as viewed by the older generations. Despite institutional influence, scandals are alarmingly frequent. In a very well known high school the prevalence of venereal disease amongst the personnel of the student body became so general as to arouse medical comment and agitation.

The larger entry of women into the business world, despite its justification, has dulled the sensitive edge of feminine modesty. This is manifest in both dress and manners. Feminine attire has become so scanty above and so short below that modesty has little remaining to hide. All this may be witnessed at any function of the "smart set". Or a visit to the popular bathing beaches soon convinces one that the indecencies of the old Roman baths are in danger of being repeated in our own time.

And in the matter of sex manners prevailing fashions are just as shocking as in dress. Within a fortnight I journeyed by boat up the beautiful Hudson. Aboard were several hundred excursionists—nearly all young people. Almost without exception, the young gallants were lounging in varying attitudes of embrace and endearment of their sweethearts. I flattered the *morale* of

my native State by saying: "This may go unrebuked in New York but not in Indiana." Only a week later my pride in Hoosier sex-behavior took a fall. Upon a public holiday I rowed a boat for several miles along White River near my native city. There were literally thousands of young men and young women, resting in canoes along the shady border of the stream, or lounging upon the banks, spooning unabashed—in attitudes which a generation or two ago would have classified a girl doing such things with public prostitutes.

These illustrations are given to show that a wave of sex-laxness is sweeping the country. The gradual removal of the old restraints, of religion, parental control, education, social customs, business relationships, have prepared the soil for the growth of noxious sex-weeds. There is an alarming drift toward the Parisian standard of morals. The lascivious presentations of the stage and motion picture are being enacted into the daily lives of youth quite generally—without blush of shame. This constant parading of sex problems before the public eye is making the race weaker, morally, mentally and physically. It is digging deep the slough of the venereal peril, from which flow the interminable streams of disease, suffering and degeneracy.

What should be the attitude of the profession toward these sex problems? Shall we be content to deal merely with the end results as found in venereal disease, and by alarmist propaganda seek to frighten the ignorant from illicit sex conduct? Would it not be wise in addition to these things, to instruct parents; children and youth in the physiologic doctrines which will show them how to become stronger morally and physically? Train them how to keep sex-impulses in subjection and remain safely upon the path of virtue. To most persons this will be a thankless and fruitless task for the ignorant and willful will go their way. Over the thoughtful and intelligent the physician should be able to exercise a wise restraining influence. First his voice should be raised in constant and vigorous protest, private and public, against the pernicious social and recreational customs which tend to stimulate harmful sex-impulses in the young. Instead of the salacious plays and movies he will urge those of wholesome moral tone; spicy it may be with clean humor, entertaining in art or literature, uplifting in ideals, instructive in nature-study, science and travel. He will counsel against the reading of lascivious literature. He will urge participation in manly sports and open-air recreations such as tennis, golf, hiking, gardening, nature-study and the like. The present generation has seen the development of some remarkable organizations which through these outdoor recreations and participation in athletics seek to make youth fitter—physically, mentally

and morally. Such are the athletic and physical training departments of schools and colleges; the Y. M. C. A. and similar organizations; and especially worthy of commendation the boy-scout movement.

Sensuality and sex erraticism thrive upon idleness. A cardinal principle in the maintenance of sex virtue, imaginatively as well as literally, is first of all to have the mind deeply intent upon the pursuit of other topics. Sex-stability is still more likely to be maintained if the individual adds to absorbing mental occupation physical activity. Whilst most important in the furtherance of sex purity that each have a job to which one's best efforts are given, it is equally important that there should be periods of recreation, which should be wholesome from the mental, moral and physical standpoints. It is just as much a part of a physician's business to point out these physiologic truths, the application of which protects against sensuous wanderings, as it is to advise against exposure to infection, alcoholic excesses, diatetic abuses, enervating social indulgences, or business stresses. One of the growing obligations of the newer medicine is that we should devote more attention to the physiologic facts of life, in relation to the cause and relief of disease. During the past four decades pathology has held the stage of professional thought and action. Now physiology must come more to the front—in both private practice and public health work.

In the field of physiological instruction it should be our pleasure and duty more and more, to instruct especially children and youth on how properly to evaluate their capacities and traits in order that their lives may fall in lines to which they are adapted, with increased prospect of contentment and success. It should further become our function to teach the methods of acquiring mental poise—how to parry mental and moral stresses when they come, or how to bear them when they fall to our lot. The soldier cannot be expected to fight intelligently or win victory in warfare unless he has been adequately trained. So in the battle against disease and disease-begetting habits, the individual must be forearmed and forewarned if he would win in the contest. Who should do this but the physician; and what phase of human conduct in the young is more fraught with danger than the sexual sphere? Yet what are we doing as practitioners or as public health officers, to give aid and training in these matters?

Sex-inquisitiveness begins to assert its driving power early in life. Parents generally taboo the question; some taking the view that children should learn of sexual facts and dangers by blundering into them as their parents before them; others refrain from instructing their children partly through ignorance of what should

be said, and partly from prudish modesty. As a rule things drift and children learn the naked and shocking story (only part true and misleading) from boastful and sensuous adventurers who besmear the whole sex relationship with nastiness. A morbid curiosity is aroused and an overpowering desire for its gratification takes possession of the individual. Sensuous pictures and imaginative suggestion are followed by realistic exploits. Not only is there the undermining of sex-stamina, but youth almost universally comes to look upon procreation as necessarily a lewd and sinful act. He fails to comprehend the higher purpose and aim—the sanctity of the union of the sexes. He does not realize that cohabitation is merely an incident in the larger problem of life and its perpetuity. It should be one of the highest duties and one of the most exalted aims of the physician to lift sexual relationships from the plane of unthinking and uncontrolled brutish impulses, to the sanctity of the marital state, with its greatest physiological prospects—the begetting, bearing and rearing of children.

My observation is that as a rule physicians, like parents, are loath to instruct the young con-

cerning sex-problems as related to the maintenance of health and virtuous conduct. Seldom indeed do they give fatherly counsel in such matters. Amongst those who essay to give moral advice in proper cases, it is interesting to note the difference in methods. Some are artless and arouse antagonism rather than cooperation. Curiously there is not a rare type of physician observed from whom one would least expect moral advice; yet he is most successful in giving it. He is tactful and powerful in driving home lessons at one time by a dramatic and profane tirade; again by ridicule; or still again by painting a calamitous and threatening outlook. A few possess the power to lead and inspire the patient to fine and determined resolution. Whilst much of the counsel and instruction we should give along these lines is moral in bent, the end-result upon the body is physiological, insuring a larger measure of health and happiness—the chief ends sought by the profession. With the rapid evolution of newer questions in the field of preventive medicine, the sex-problem looms as one to which larger and larger attention should be given in the making of a stronger and better race.

MASSIVE INFECTION OF VACCINATED PERSON WITH BACILLUS TYPHOSUS

That typhoid vaccination produces a high degree of immunity is proved by army statistics. However, no proof has been available that such vaccination could protect against massive infection. A case of massive infection with *B. typhosus* is reported by Brooks C. Grant, Washington, D. C. (*Journal A. M. A.*, Feb. 19, 1921) on account of the rarity of such an occurrence. A technician in the laboratory while working with a heavy suspension of living *B. typhosus* sucked approximately 0.5 Cc. of this culture suspension through the cotton plug of the pipet into his mouth. He immediately washed his mouth thoroughly, three times, with 50 percent alcohol. This soldier was last vaccinated with triple typhoid (saline) vaccine, one year and two months prior to his infection. He was at once given 0.5 Cc. of triple typhoid vaccine in the hope of increasing his immunity. Four days after infection, he complained of slight headache, but had a normal temperature. No further symptoms appeared until the eighth day after infection, when he complained of slight headache and weakness. On the twelfth day a specimen of feces was collected and plated on Endo medium in the usual manner. The typhoid-like colonies appeared in a proportion of about 1:10 of *B. coli*. These were picked and proved to be *B. typhosus* by the customary sugar serum reactions. Other symptoms did not appear.

RELATION OF INCREASED BLOOD VISCOSITY TO TRANSIENT ATTACKS OF HEMIPLEGIA

The probability is suggested by William H. Holmes, Chicago (*Journal A. M. A.*, June 11, 1921) that changes in the physical character of the blood may be equally at fault with diseased vessels and changes in pressure. He urges that in the care of patients of advanced years, or those known to have vascular disease, and in those who have had cerebral vascular crises, dehydration of the tissues should be avoided. The introduction of anticoagulant salts and of fluid may be indicated in certain cases of transient hemiplegia or aphasia in order to prevent actual thrombosis in vessels when slowing of the circulation is the cause of the symptoms.

All industrial plants are more or less dusty. But how dusty is the air in any particular plant? The degree of its dustiness is important, for certain forms of air dustiness create in the workers a predisposition to tuberculosis and other diseases. Dr. O. M. Spencer, of the U. S. Public Health Service, shows in a recent report that neither exhaust pipes nor wet processes in grinding and polishing prove that the dustiness in an industrial plant is satisfactorily controlled. Many exhaust pipes do not exhaust, and wet processes may create far more dust than dry ones. Only actual dust counts made at the working level show the actual dustiness; and these should be made periodically.

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EDITORIALS

**CHRISTIAN SCIENCE; THE GREATEST
DELUSION OF THE AGE**

From time to time we have had occasion to offer brief comment or criticism concerning some of the inconsistent, irrational and fallacious opinions and teachings of Christian Scientists, but in practically every instance the Christian Scientists, either through their "Publication Committee" or individual disciples, have sent in a reply for publication. Usually the reply has covered several pages of typewritten manuscript, and not once has there been offered anything that by the wildest stretch of imagination could be considered argument from a sane and logical standpoint. The effusions practically always have been of the vague, intangible and specious type, open to but one interpretation and that carrying with it the suggestion that Christian Science requires no defense and should be believed and relied upon whether understood or not, or whether appealing to the student as rational or not. We therefore have not considered such contributions deserving of space, and, as might be expected, have been criticized for our seeming unfairness in not permitting retaliation when attacked. In the June number of *THE JOURNAL* the article by Dr. Frank B. Wynn, in which Christian Science is scored mildly, has brought forth a reply from the Christian Scientists for publication, though, as usual with all such replies from the same source, there is a lack of rational argument. Just why the Christian Scientists should devote so much time and energy in answering criticisms and comments in a medical journal is difficult to understand except on the supposition that advertising of whatever kind is profitable, especially when it costs nothing, and everyone knows that the Christian Scientists solicit and receive more free advertising than any other enterprise. Had there been any real argument in what they offered, their replies would have been published, but in view of the fact that the replies assume that Christian Science teachings should be accepted without question and without suspicion as to its fallacy, we have not felt that either fairness or courtesy demanded that we give space to the communications sent in for publication. However, in view of the charge that

we have not discussed Christian Science with fairness, but have resorted to the school boy's habit of calling names from a safe distance, we are going to discuss the subject of Christian Science from our standpoint, abstracting freely from earlier writings on the subject, and in doing so we desire to apologize to our readers for consuming so much space.

Christian Science is the greatest delusion of the times; the greatest insult to human intelligence; the strongest proof, if proof be needed, of our low intellectual standard. It seems as though some people must have empty skulls if the miserable jumble of unintelligible drivel, enunciated by a paranoiac woman, is taken by our "cultured" classes as a novel philosophy or an inspired religion. That it is unchristian is proven by the fact that it is at variance with the spirit and teachings of the Christian religion, and that it is unscientific is proven by the fact that its deductions and practices are not founded on knowledge gained by systematic observation, experiment and reasoning. It presents no knowledge that is coordinated, arranged and systematized, and in fact it presents nothing that by the wildest stretch of imagination can be considered as approaching anything that is scientific. Throughout all the writings and teachings of Christian Science we find the same intangible, indefinite and nebulous optimism which takes account of no obligation of things objective save to ignore them, and puts all realities alone in the realm of the subjective consciousness. Yet there are some fairly sensible people who will say, "Well, there is some truth in Christian Science," to which we reply, *there is no truth in it*. Whatever there is of a courageous, cheerful attitude in Christian Science is not peculiar to it; even the old physicians knew the value of cheerfulness very well; they cultivated it themselves and encouraged it in their patients.

As to what is peculiar to Christian Science, that matter is non-existent, that disease is only an error of the mind, that germs are a fiction, that the worst diseases can be cured by a jumbled-up prayer—all this is so stupid and false that one loses patience when confronted with the necessity of discussing it. Physicians recognize the effect of the mental state upon the development of illness; and like true scientists, they give it its true value and relegate it to its proper place. They, furthermore, classify certain affections under the head of mental, emotional, nervous, hysterical, etc., and in their practice they treat such disorders, when recognized, by a method of moral suasion, nervous shock, and hypnotic suggestion.

The mind is known to have an effect on the nerves; for they are each a part of the same sensory process; and the vaso-motor system or

nerves is known to surround the muscular tissue of the blood vessels and to control the supply of blood throughout the whole human organism. Hence, if the nervous system be disorganized through emotion, worry, or hysteria, the normal flow of the nourishing blood to the various parts of the body is disturbed, and we get the phenomena of congestion or anemia,—either an inflammation or a starving of a part. A contented mind, therefore, induces health: while a discontented mind is more likely to produce the opposite. Emotional and hysterical natures are more prone to disease than those that are rational. And under hysteria as a cause we may find symptoms which for a time simulate the likeness of many known diseases that spring from external agents. But so deceptive are these symptoms, sometimes, that frequently the physician is misled, and attributes them to the disease which they merely bear likeness to. It is the patients suffering from this class of diseases, whose cases perhaps have been misapprehended by the doctor, who make the chief capital in trade for the Christian Scientists. One cure of a hysteric will outweigh a thousand failures of their mummerly and nonsense in organic ailments; and people flock to the quack because of the wonder of his supposed miraculous power. Yet reputable physicians are accomplishing these same cures day by day in their practices, and because they make no mystery of them, do not advertise them with a blare of trumpets and refuse to call them save by their rational name, no alarming wonder ensues. As a matter of fact cures are expected of them, and thousands of cured and grateful patients are discharged every day by regular doctors without a word of comment.

And while the Christian Scientist claims that there is no such thing as matter objectively considered, that disease is only an error of the mind which medicines will not heal, they involve themselves in a curious inconsistency when they cannot escape the surety that in certain cases drugs which are poisons in every instance, without exception, if partaken of, whether consciously or unconsciously, will surely kill. Are these drugs then manifestations of the mind? Or will the Christian Scientist confess that drugs are simply matter? Again, in proof of their theories, they are not willing to submit to any test of their science which shall be scientific and acceptable to all men. It has been suggested to many of the more ardent Christian Scientists and not a few of the "healers" who deny the reality of disease and of the destructive effects of poisons, that they prove the courage of their convictions and permit someone to inject them with the germs of diphtheria, or tetanus, or gonorrhea, or to take a 5-grain dose of morphine or strychnine, or atropine,—but so

far not a single Christian Scientist has accepted the challenge.

There never has been any question in the minds of the Christian Scientist "healers" as to the reality of money, even though they deny the existence of pain or disease, and the manner in which they extract from two to five dollars per treatment from their deluded victims is really clever; but the most artistic piece of robbery is the "absent treatment" which brings the usual fees to the "healer". What an easy way to gain money and how delightful it must be to go away on a fishing trip, and while gone make up all the expenses of the trip by charging "absent treatments" to all the luckless victims who are sufficiently deluded in Christian Science to stand the gaff.

Some of the practices of Christian Scientists are attended by unwarranted fatal results, and as an instance we may cite the death of two children from diphtheria, near Richmond, while under Christian Science treatment. Diphtheria now is a curable disease when promptly recognized and promptly treated with antitoxin in suitable doses. To permit two children to die of the disease, with no other help afforded than the nonsensical gibbering of a Christian Science "healer" who chants a few well chosen chapters from the book of Mrs. Eddy while the suffering children are choking to death, is positively criminal. No punishment is too severe for those responsible for a death under such circumstances.

An incident that was amusing, but proved that the contentions of the Christian Scientists are idiotic, came to our notice a few months ago. A young girl became quite deaf and was taken by her mother, an ardent Christian Scientist, to a Christian Science "healer". The "healer", true to his professed belief, attempted to make the girl admit that her deafness was only imaginary or a delusion of the mind, but though the receptive patient diligently read Mrs. Eddy's book, and daily consulted the "healer" for spiritual advice and consolation, the hearing failed to return, and in fact the deafness persisted in becoming more pronounced. After the lapse of more than a month, with no relief, and the exchange of seventy-five real and tangible dollars for Christian Science treatments, the girl finally secured permission from her mother to see an ear specialist belonging to that materialistic class known as regular doctors. The history of the trouble, taken into consideration with scientific functional tests of the hearing and an examination of the ears, indicated that the trouble in all probability was an interference with the sound conducting apparatus which could be remedied easily. Learning that \$75 had been spent on Christian Science treatment without securing relief, and believing that he could prove

to the fanatical mother that there was something in the reality of matter with its effect upon health and its functions, the specialist made an offer to cure the daughter of the deafness, without the aid of drugs or knife, and without pain, upon the payment of the same amount that had been paid to the Christian Scientist "healer", the daughter to be the judge as to whether cure had been accomplished or not. Upon earnest urging of the daughter, the mother reluctantly consented to the terms, whereupon the materialistic doctor—he who believes in the reality of matter and the relationship between cause and effect—proceeded with syringe and warm water to remove from each of the young lady's ear canals a large piece of hardened wax, and—miracle of all miracles—the hearing was immediately restored to normal acuteness.

Another case. A child of Christian Science parents began to cry with earache. No amount of mental gymnastics under the schooling of the parents could make the child abandon the claim that the ear pained. A "healer" obtained no better results, and finally, after many hours of suffering, a physician was called. Being materialistic, he insisted upon examining the ear, and, much to the surprise of the parents, succeeded in extracting from the ear canal a bean, which, upon becoming moist after insertion in the ear canal, had proceeded to swell and with swelling had closed the canal and by pressure upon nerves had produced the excruciating pain.

These are but two of the many, many cases criminally neglected or treated by Christian Scientists that have come to the knowledge of medical men.

Think of the number of cases of permanent blindness that would follow Christian Science treatment of all cases of cataract, glaucoma, and some other serious eye diseases; of the number of crippled and deformed people if they always placed their trust in Christian Science after receiving broken bones or other injury; of the unnecessary deaths that would occur from appendicitis, peritonitis, ulcer of the stomach, and many other surgical affections if "healers" instead of educated, trained and experienced surgeons had the management of such cases!

We hear much about Christian Science cures. The Wednesday night experience meetings in the Christian Science churches are given over to a recital of the wonderful cures that have been brought about by Christian Science. And how strange that so many are able to make their own diagnoses, for seldom can it be proved that the diagnoses were made by reputable medical men. In other words, the cures do not stand the light of honest investigation. The diseases, like the cures, are figments of the imagination in a very large percentage of the cases.

There have been analyses of many Christian Science cures and in nearly every instance the disease which Christian Science was credited with having cured never existed at all, or if existing was cured or disappeared before the patient accepted Christian Science. On the other hand, the failures of Christian Science are carefully guarded, and except when a medical man is called in to sign the death certificate, or a coroner's inquest is demanded, the evil results following reliance upon Christian Science nonsense are skillfully concealed, thus bearing out the contention that the teachings and practices of the sect tend to encourage deception. Here let us add that the charitable acts of physicians in accepting service when a person is dying under Christian Science care, and then graciously signing the death certificate, is the means of keeping from the public information that very possibly would point unerringly to what in many instances should be considered criminal practices on the part of these fanatics.

If the Christian Science position were true, the whole sequence of mind development as we actually know it would be absolutely reversed, which is contrary to the facts and therefore absurd. A person in order to experience each sensation would have to exert will in order to do so; and no sensation could be received without the exertion of the will. Our own knowledge will tell us how silly this notion is, for many sensations come to us aside from our own volition; as, for instance, the heat and cold that are due to the weather; the painful feelings we possess through the unkindness of our fellow-men; the comfort or discomfort that is present on account of our surroundings; the pain of diseases which ensues from the presence of some specific germ which causes irritation in the tissues; and so on. Furthermore, it is well known that sudden or continued emotions produce a decided effect upon the body. Anger causes us to tremble and to experience unwonted sense of heat. Fear makes the extremities grow cold. Shame causes us to blush. Merriment brings about a certain physical convulsion called laughter. Worry causes a general depletion of the vitality. *But none of these things produce typhoid fever, or diphtheria, or smallpox, or malaria, or a broken leg, or a bullet wound; and none of these will effect a cure of such specific injuries, although our state of mind, by rendering the functions of our organism harmonious, may do much to assist such a cure.*

The point where Christian Science has duped its votaries is this: It has confused the category of diseases that are present through an emotional or nerve disturbing cause with the category of diseases that are present through external causes; and it has placed all manifestations of pain and sickness under the former.

The objection to the Christian Science practitioner or "healer" is that he is uneducated in the laws of anatomy, physiology, pathology and the diagnosis of disease. He refuses to gather, compare, systematize, and analyze facts, or to deduce any system of knowledge from them. His is the same diagnosis and the same remedy for all ailments, no matter what their source or present development; and, therefore, his pseudo-science is based on the deification of ignorance.

What is the moral effect of Christian Science? What do church members think of a religion claimed to be the religion of Jesus, and yet asserting that its principles were discovered and revealed by an illiterate woman? And what are the prospects of moral progress when the teaching is that there is no such thing as sin? What about the influence upon children and the young by teaching them as early as possible to deny and doubt the evidence of the physical senses which were given by an all-wise Creator to convey impressions to the mind, and which would not be present in the human organism unless intended for use? To deny the action of the physical senses and their suggestions is to deny the fundamental possibility of truth. If your child tells you he hasn't felt what he *has* felt, and that he hasn't seen what he *has* seen, and that he hasn't touched what you know he *has* touched, you are positive that he is lying, and you think it is high time to correct or punish him. But Christian Science does the very opposite. It distinctly and authoritatively approves of this habit of mind; and, therefore, it is fostering a rising generation, trained from the beginning in the fundamentals of hypocrisy and deceit.

A reputable physician must have had at least two years of college or university work, at least four years in a medical school, and in some states an additional two years in a hospital are required before he is deemed competent even to *begin* the practice of medicine. Are these well educated and well trained scientific men to be relied upon, or shall we place our lives in the hands of "healers" who obtain their diplomas after attending six or eight vague, indefinite and incomprehensible lectures, and who do not even know the names and locations of the bones, nerves, blood vessels, and muscles of the body? Think what it would mean to depend upon Christian Science and to substitute it for the benefits that have come through the progress of modern science! The plague, cholera, typhus and yellow fever, smallpox, diphtheria, typhoid, syphilis, consumption, and many other diseases are no longer the awful menace to life that they were of old. Tetanus or lock-jaw, and hydrophobia are now cured by a specific lymph, whereas formerly nearly all cases proved fatal.

Antitoxin has reduced the mortality from diphtheria to about five percent and it is thought that it would be zero if the treatment could be administered early enough and in suitable doses in every case. The scourge of smallpox, which a hundred years ago swept whole communities and killed or disfigured for life a very large proportion of all those who contracted the disease, is a thing of past history, due to thorough and systematic vaccination. Child-birth deaths have been reduced to one-seventh what they were before the advent of asepsis and antisepsis, and our blind asylums, formerly filled with luckless children who lost their vision soon after birth, from ophthalmia neonatorum, are now no longer recruited by victims of that disease. The care in preparation, and the standardization of drugs, the inspection and sterilization of milk, the scientific supervision of the making and distribution of foods for infants and children as well as for adults, have all contributed to the checking and prevention of disease. Are we to cast aside these benefits, brought about through years of patient and intelligent investigation and labor and substitute for them the offerings of an uninformed and misguided sect of ultra-emotionalists? Are we to throw aside all that has been accomplished by medical men, representing the life work by some of the brightest intellects that the world has ever seen, and are we to deny the value of the results of their work when incontrovertible proof of their findings is patent to every rational human being? Is there no truth in anything, and is there no relationship between cause and effect? Are there no facts which can be proved by the most competent testimony of trained minds? We have no criticism to offer when the delusion of Christian Science concerns no one but the individual possessing it, but it becomes a serious matter when it affects the lives and happiness of others in the community. Let the Christian Scientist believe in the non-existence of matter and the unreality of disease, but do not let him recklessly become the instrument of spreading contagious diseases, nor permit him to subject innocent and defenseless children to the horrors of neglect, and to the miseries of pain and sickness.

JOHNS HOPKINS DECISION CONCERNING SURGICAL FEES

The newspapers announce that Johns Hopkins University has established a thousand dollar fee as the maximum amount which any surgeon connected with that institution can charge for an operation. As might be expected, and as no doubt was desired, there has been much controversy in the public press all over the country as to the wisdom or fallacy of such a ruling. To us it looks like a cheap advertising stunt

for Johns Hopkins University, or perhaps we might say a scheme for filling the hospitals of that institution with surgical cases. At all events, a university that has been held in such high esteem by the medical profession because of its high standards of medical education, should be in better business than trying to fix an arbitrary standard to govern the value of surgical services rendered to patients irrespective of ability to pay. It is as illogical as it is unfair to permit the millionaire to enjoy the benefits of a skillful surgical operation which saves his life at a cost of but one thousand dollars when he unhesitatingly spends more than that amount every year for his cigars, pays a chef ten to twenty thousand dollars a year, buys automobiles at fifteen or twenty thousand dollars apiece, and spends thousands in maintaining private yachts and buying baubles of various kinds. Of course the lawyer can charge this same man one hundred thousand dollars for securing a divorce from his wife, a former Broadway chorus girl, and nothing is thought of it, but the skillful and experienced surgeon who saves his life by a skillful operation must be content with a thousand dollar fee. We have no quarrel with the Johns Hopkins University for its charity work, or its absorption of fees charged for work done by the surgeons connected with the institution, but we do believe that the fees for surgical work should be consistent with the ability of the patient to pay. Under such circumstances a very large proportion of the people who are given skillful surgical attention will get off with a payment of little or no money, and the few who pay large fees will be limited in number and not only quite able to pay the fees charged but probably will pay them gracefully and without a word of complaint. To come down to brass tacks, it is impossible to place a correct monetary value upon health or life. Some states have a standard whereby a life is considered as worth ten or fifteen thousand dollars from a purely economical standpoint. That being the case there is no reason why a surgeon should be limited to a thousand dollars if he saves a life that is worth ten or fifteen times that amount. Some rich men have been known to offer a million dollars for a new stomach or for the recovery of eye sight, so it is very evident that there is a varying standard of values, even among the laity, so why try to fix a fee for the medical man which will apply in every case for the services that he shall render. Again we think that Johns Hopkins University has made a cheap play to the galleries, and ought to have a higher standard of propriety and one in keeping with its other high standards.

NATIONAL CANCER WEEK

Plans for National Cancer Week to be held from October 30 to November 5 have been announced. This is one of the biggest and most important movements undertaken by the National Cancer Research Committee, and should be of immense value in educating the public on this most important question. The main features of the campaign are summarized as follows:

1. ORGANIZATION.

As it is desired to reach all parts of the country and as many of the population with the hopeful message of cancer control as possible, it is of course necessary to effect a complete organization before anything else can be done. It is therefore recommended that the State Chairmen undertake to see that a Chairman of a Local Committee is appointed for every community of five thousand population or more in his State. The Chairmen of these local committees should then select their local committees for the purpose of carrying out the following program:

2. ACTIVITIES TO BE UNDERTAKEN.

The aim in this campaign is, as stated above, entirely educational and designed to reach as many people as possible. The three main activities to be pursued may be briefly summarized as follows:

(a) *Lectures.*

A lecture bureau should be established and the lecturers instructed by use of the Society's syllabus, as to how the subject should be presented. Lectures should include both those arranged for professional groups, such as medical societies, nursing organizations, etc., and those for the general public.

(b) *Literature.*

The Society will provide a moderate quantity of literature to be distributed at meetings. As the amount available for any state must at this time be apportioned in accordance with some arbitrary method, such as population or number of members in the Society from that state, it is quite probable that it will be desirable for either the state committee or local committees to secure a modest sum for the purchase of additional printed matter. This can be secured at cost from the National Society, the little circular "Vital Facts About Cancer" recommended for this purpose being quoted at \$20.00 per five thousand or \$35.00 per ten thousand.

(c) *Publicity.*

This also falls naturally under two main headings, articles in professional journals and those in the lay press. It would probably be desirable to place the latter in the

hands of a trained newspaper man for all material should be carefully prepared and edited before it is given out. The news articles are simple; but abstracts or digests of the lectures given should be handled with extreme care. The editors of medical journals should be asked to cooperate by calling the campaign to the attention of their readers and asking for the cooperation of the profession. Editors of these journals will doubtless be willing to feature the educational campaign for the control of cancer in some number preceding the campaign.

EDITORIAL NOTES

THE annual session of the Indiana State Medical Association will be held in Indianapolis on Wednesday, Thursday, and Friday, September 28, 29, and 30, 1921. Remember the date and arrange accordingly.

THE preliminary program for the Indianapolis session is published in this number of THE JOURNAL. It indicates that the various sections will provide interesting programs. We suggest that those who are to open the discussion of papers should obtain the complete copy of papers they are to discuss.

WE learn that there is to be a rupture in the State Board of Health and that the domination of the "regulars" is to cease. Perhaps it is just as well to let the people have a taste of incompetency and inefficiency, for that is exactly what will happen if the peculiar and irrational ideas of some of the irregulars are to prevail. Sometimes we have to burn our fingers before we learn that the stove is hot.

WE feel guilty in giving so much space in this number of THE JOURNAL to a discussion of Christian Science, but we are disposed to give our reasons for condemning Christian Science, and if the disciples of that peculiar cult can answer our arguments with anything more than vague and meaningless replies such as we have been receiving and which we are criticized for not publishing, we shall be pleased to give space to the contributions.

AT a recent meeting of the Michigan chiropractors, held at Jackson, "Doctor" Palmer, the alleged "father" and "high priest" of the cult, from Davenport, delivered an address in which he made the following statement: "Give me the public press and the power of public opinion, and you may write as many laws as you please upon the statute books." Palmer is right, and if the medical profession had realized this fact long ago, we would not have any quacks and charlatans to fight at the present time.

It is very evident that either the chiropractic craze is on the wane or that chiropractors are getting so thick and competition so acute that not only must business be secured through alluring advertisements but by the cut-rate method as well. It is not at all uncommon at the present time to see advertisements like the following: "The Old Reliable Chiropractor. Improved Methods of Treatment. Satisfaction Guaranteed." It reminds us of the solicitations of the less recognized members of a trade. But then, eventually we may expect most anything, for chiropractic is neither a profession nor a trade. It is mostly humbuggery.

CHIROPRACTIC gains another victory! Nuxated Iron placed in the background! According to a communication in a recent number of the *Journal of the A. M. A.*, credit for Jack Dempsey's recent victory is given to chiropractic, and Nuxated Iron is no longer in the ring. The communication states that Iowa newspapers have given lengthy and elaborated reports to the effect that adjustments by the chiropractor who was on Dempsey's training staff deserves the credit for Dempsey's wonderful victory. It is strange that Nuxated Iron should lose first place in these prohibition days! However, we must give "honor" where "honor" is due!!!

WE are still waiting for a reduction in the price of instruments and surgical appliances. During the war there may have been some excuse for the enormous increase in the prices, though we have felt that surgical instrument makers always have profited, yet we do not feel that there is any excuse for continuing the war prices at this particular moment. Somehow or other the law of supply and demand does not seem to cut any figure in the price of equipment, for the doctor who gets his mind set upon buying something of particular make or particular manufacture makes his purchases irrespective of what the price may be. The manufacturer is not slow to realize this fact and take advantage of it.

WE desire to remind the members of the Indiana State Medical Association that at the time of our annual session Indianapolis will be crowded with Grand Army veterans and their friends who will be holding a convention in Indianapolis on the same dates as we hold ours. It is quite likely that the hotels will be crowded up to and including Wednesday, September 28, when many of the visitors will be leaving. It would be well for the members of our Association to make hotel reservations at once, if possible to do so. We are advised that the Indianapolis hotels will make every endeavor to care for us in a proper manner, and that they

feel confident that they can make reservations for Wednesday night, providing applications are sent in promptly.

THE Committee on Arrangements for the annual session of the State Association have reserved one hundred rooms at the Claypool Hotel for members of the Association. It was necessary to do this on account of the National G. A. R. Encampment which is held there at the same time. The rates for the rooms will be as follows: Single room with bath, \$3.50 to \$6.00; double room with bath, \$4.00 to \$7.00. If you wish a room reserved for you, kindly state the day and the hour that you expect to arrive, accompanied by your check for one day's accommodation. You will then be mailed a receipt entitling you to the room. Mail all correspondence to Dr. C. H. McCaskey, Chairman Committee on Arrangements, 422 American Central Life Building, Indianapolis, Indiana.

"AFTER several years of effort a new medical practice law finally has been secured in Florida, clearing away the obsolete multiple board arrangement which for many years has caused much confusion in medical licensure in that state. The new law establishes a composite board which has full authority to refuse or revoke licenses, to refuse recognition to low grade medical colleges and to protect the public against incompetent physicians. The personnel of those appointed on this board promises assurance that the provisions of the new law will be enforced. The people of Florida are to be congratulated on the successful passage of this law, and it is hoped that they will appreciate its importance and support its vigorous enforcement. The only flaw in the act is that osteopaths and chiropractors are exempted from the requirements of the medical practice act since, for the time being, their practice is regulated by separate boards. In time, however, when public opinion has been awakened to the injustice and unwisdom of providing an inferior standard of qualifications for any group of healers, these special boards may be abolished, as they were this year in New Jersey. Public opinion will not long uphold an evident injustice, once attention has been clearly called to it."—*Journal of the American Medical Association*, July 30, 1921.

UNCLE SAM has a rather peculiar way of doing business. He is painfully exacting in securing what is his due, but very negligent or procrastinating when it comes to giving attention to dues from him to others. There is no such thing as an orderly system in the conduct of Uncle Sam's affairs except in the collection

of taxes and then the taxpayer feels the grip of the powerful hand that squeezes until it hurts. We are reminded of all this by the almost criminal carelessness with which the government insurance records are kept, the inexcusable delay in paying the soldiers the indemnity that is due them and badly needed, and the promptness with which Uncle Sam exacts payments from these same soldiers for anything that may be due, and the certainty with which penalty is exacted for non-payment. Then to rub it in, acknowledgement of payments is seldom if ever made if payments go through the mail, and the poor devil who makes his remittance is never quite sure whether the obligation has been canceled or not. Perhaps we should not complain, for the good old United States is still a better place to live than any other place on earth, and we are a long way from the governmental oppression of Russia or some of the other European countries, but it does seem as though honor and fairness on the part of the government is just as necessary and commendable as it is in individuals.

DOCTORS, like all other professional and business men, are solicited by promoters and brokers of every kind and description who have investment propositions for consideration. We long have advocated the plan of buying safe and sound securities, giving a fair amount of income, as being the best for the doctor who generally has but limited funds to spare, and, at this particular time, when so many presumably good securities are offered the public, the advice is all the more appropriate in view of the uncertainty of business conditions. Doctors have the reputation of being easy marks when it comes to buying something that offers big returns, but even admitting the fact that pure speculative investments are shunned, there is room for considerable caution in buying what seems to be safe securities. For instance, some bankers and most of the brokers will recommend stocks and bonds having a high yield, and yet the very fact that these securities offer a yield above the market rate is quite sufficient to make one suspicious as to their soundness. Generally speaking, the more secure the investment is, the less return in the way of dividends. However, it is better to be safe than sorry, and the doctor who has a little money to invest will be wise if he picks out the safest securities, and so judged by his banker, even though the returns are not so great as those offered by investments of a more questionable character. This reminds us that there is nothing better and nothing safer than government bonds, which at the present rate below par makes them a good buy.

DR. GEORGE F. KIEPER, of Lafayette, writes us concerning the poor showing made by Indiana doctors on the membership rolls of the American Medical Association as well as on the subscription list of the *Journal of the American Medical Association*. The criticism is well taken, for we feel a little ashamed of the fact that such a limited number of the members of the Indiana State Medical Association have identified themselves with the American Medical Association or even subscribed for its Journal. In the first place, every reputable Indiana doctor ought to identify himself with the A. M. A., and no Indiana doctor who professes to be at all progressive or up to the times in medicine will fail to subscribe for the *Journal of the A. M. A.*, the largest and by far the best general medical journal published in the world. Generally speaking, it is the better class of men who buy medical journals and medical books, and in reality the least competent men, or the ones who need the educational effects of late medical books and current medical journals are the ones that need them the most. The incompetent doctor is always the one who not only never acquired a good education, medically or otherwise, but makes little effort to improve his condition. He is the one who does not think it worth his while to join the A. M. A. or take current medical journals, of which the *Journal of the A. M. A.* holds first rank, and he also considers himself so smart that he cannot find benefit from attendance upon his county medical society meetings or the sessions of the state medical association. We have prided ourselves upon having a very progressive medical profession in Indiana, but we admit there is room for very great improvement through an increase in the number of medical men who affiliate with our great national medical organization and subscribe for its wonderful medical journal.

ACCORDING to a decision of the state supreme court on June 22, the Illinois Medical Practice Act, as revised in 1917, is unconstitutional. This decision was handed down in the case of Lucius J. Love, a chiropractor of Davenport who refused to take out a license. According to the *Illinois Medical Journal* "the court's opinion holds that the revisions of requirements for chiropractics are unreasonable and discriminatory. The court's action restores the old medical practice act in effect prior to the revision.

"It was announced that a motion for a new trial will be filed. In the meantime numerous prosecutions instituted by the state department of registration and education will be held up until this motion is disposed of.

"There is little hope that the revision will be saved, however, as the opinion of the court,

which was prepared by Justice Duncan, was concurred in by the full membership of the bench.

"The decision is a blow to the state medical society, which spent much time in preparing the revision of 1917, but it brings joy to the heart of President Palmer of the Des Moines (Ia.) Chiropractic school, who has been protesting against the act ever since its passage. Love, who made the fight in the supreme court, is a graduate of the Palmer school.

"The revision of 1917 was prepared by Chas. E. Woodward, now president of the state constitutional convention. Its one weak spot, it seems, was the section which revised the law relating to osteopathy, chiropractics and practitioners other than medical doctors.

"The old law provided for an examination and the licensing of these practitioners, but did not undertake to specify the qualifications required of applicants for licenses.

"In making the revision, applicants for licenses were required to pursue a course of study equivalent to that of the medical practitioners and in addition qualify in their own school. The educational qualification contemplated a period of four years in college.

"Love took a two years' course at the Palmer school and then asked to be examined for a license. This was denied, and on advice of his attorney he began to practice for the purpose of testing the constitutionality of the law."

It strikes us as rather amusing that various irregulars who loudly prate of their disdain of drugs and medication of any kind do not omit drug prescriptions in their practice, whenever they can get away with it. Osteopaths, chiropractors, and even opticians, to a very large extent, not only prescribe but dispense medicine. We never have understood why osteopaths, who claim that their practice is drugless, could even secure a license under the Harrison Anti-Narcotic law, and yet we know that certain osteopaths regularly prescribe opiates and presumably they do so under federal license. They also prescribe and use other drugs and chemicals, seemingly with impunity, and what is true of the osteopaths is also true of the chiropractors. The opticians, or as they sometimes like to call themselves, "eye-sight specialists", have no hesitancy in attempting to treat various eye diseases, even glaucoma and cataract, and the strange feature of the whole affair is that druggists will fill prescriptions written by opticians. But then, all of these law breakers have discovered that our medical practice laws are dead letters and could just as well be wiped from the statute books as far as any benefit to the public is concerned. In fact, we are in favor of abolition

of laws that cannot, or will not, be enforced. There was a time when the medical practice laws could have been enforced in every state in the Union, and it only required the united influence of the medical profession, backed by the intelligent portion of the public, to make a medical practice act a more protective feature and of some benefit to the public. Laxity on the part of Boards of Medical Registration and Examination, or a "let George do it" attitude on the part of the rank and file in the medical profession has resulted in a gradual increase in the wave of law breaking as pertains to medical practice, until now it is next to impossible to stem the tide. Those of us who have been waving the danger signal have been called alarmists, and even laughed at for our temerity, but events have indicated that had the warning been observed the public would not be suffering today from a horde of medical incompetents and pretenders who are not only practicing medicine without let or hindrance but through sheer force of numbers and financial ability to defend themselves, are rather safely entrenched and seemingly difficult to dislodge. A leading exponent of the chiropractic faith says if the public is being harmed, let the public repair the injury. In the end perhaps the public will turn and correct the evils of today, and when that time comes there will be a day of reckoning for the pretenders which will bring about painful results. In the meantime the pseudo-medical cults are reaping a harvest.

DEATHS

DR. SALLIE STEPHENS, who has been a medical missionary in India for the past forty-two years, died at the Methodist Hospital, Indianapolis, July 23, 1921, aged sixty-three years.

DR. JESSE L. HILL, of Lowell, Indiana, died at his country home near that city, July 20, 1921, at the age of seventy-seven years. He was a graduate of the Rush Medical College, of Chicago.

DR. MARSHALL D. CALLANE died July 21, at his home in Flora, Indiana. He was a graduate of the Indiana Medical College, of Indianapolis, and was a member of the Carroll County Medical Society and the Indiana State Medical Association.

DR. PAUL ARMSTRONG, of Muncie, Indiana, died July 18, at the age of 44 years. He was a graduate of the Barnes Medical College of Saint Louis and had practiced medicine in Gilman, Indiana, for thirteen years before his removal to Muncie.

DR. GEORGE A. THOMAS, of Bismarck, Indiana, died July 10, 1921, at the age of forty-two years. Dr. Thomas was a graduate of the Bennett Medical College of Chicago. He was a member of the medical corps of the United States Army during the world war, and served six months abroad.

DR. LINDSEY L. WHITESIDES, of Franklin, Indiana, died July 17, at the Methodist Hospital, in Indianapolis, aged sixty-one years. Dr. Whitesides graduated from the Medical Department of the University of Louisville in 1883 and was a member of the Johnson County Medical Society, the Indiana State Medical Association and the American Medical Association. He had been county and city health officer for a great number of years and had served several terms as a member of the State Board of Health.

NEWS NOTES AND PERSONALS

MRS. JOHN B. MURPHY, widow of the well-known surgeon, died at a hospital in Chicago on July 12.

DR. I. S. MILLSTONE, of Gary, has entered Rush Medical College of Chicago for a course in dermatology.

DR. AMOS CARTER was recently re-elected to the superintendency of the Tuberculosis Sanitarium at Rockville.

THE Highland Sanitarium at Martinsville, Indiana, has been sold to Jap Jones, who will act as manager of the institution.

DR. A. FISHER and DR. C. M. McVEY recently formed a partnership for the practice of medicine in North Judson.

DR. L. N. GEISINGER, of Auburn, has resigned his position as secretary of the Board of Examining Physicians of DeKalb county.

THE home of Dr. P. T. Lampton at Milroy was damaged to the extent of two thousand dollars by fire on the evening of July 4.

DR. S. C. WALTERS celebrated his sixtieth birthday anniversary on June 14, by entertaining thirty-six doctors at his home in Middletown.

DR. H. K. BONN, of Indianapolis, has returned from an extended trip in the West, where he attended a number of the Western clinics.

DR. J. T. CARNEY, a graduate of the University of Louisville, has established himself in Batesville, Indiana, for the practice of medicine.

DR. W. F. CLIPPINGER has been appointed by the county commissioners of Vanderburg county as physician for the County Infirmary for one year.

THE annual picnic of the Howard County Medical Society was held June 23 at Indian Springs. The members and their families and guests enjoyed the outing.

THE tuition fees of the Medical School of Harvard University have been increased from \$225 to \$300, the increase becoming effective with those entering next year.

DR. D. R. SAUNDERS, of Franklin, was chosen by the county commissioners as health officer of Johnson county, to finish the unexpired term of the late Dr. L. L. Whitesides.

APPOINTMENTS as consultants to the National Pathological Laboratories have been accepted by Drs. George Dock, of St. Louis; Otto Folin, of Boston, and Ludvig Hektoen, of Chicago.

DR. ROBERT BRAUNLIN is now associated with his brother, Dr. W. H. Braunlin, of Marion, Indiana, in the practice of ophthalmology and otolaryngology.

DR. MILES F. PORTER, SR., of Fort Wayne, gave an address at a meeting of the Warsaw Rotary Club on July 15, his subject being "Cancer; Its Prevention and Its Cure".

DR. GARDNER C. JOHNSON, superintendent of Boehne Camp, Evansville, has been attending the Trudeau School of Tuberculosis at Saranac Lake, New York, for the past two months.

THE members of the Fort Wayne Medical Society held their annual picnic at the Elks' Country Club on Tuesday, June 28, 1921. About seventy-five members were in attendance.

DR. ETTA CHARLES, of Anderson, recently has been graduated from the Lakeside Hospital at Cleveland, where she completed a course in anesthesia at Dr. George Crile's clinic.

THE degree of Doctor of Science was awarded at the recent commencement exercises of Brown University to Dr. Hideyo Noguchi, pathologist and bacteriologist, of Rockefeller Institute.

DR. J. D. McCANN, of Monticello, has been made president of the Railroad Surgeons' Association. Dr. McCann was formerly secretary-treasurer of the west division of the organization.

DR. PAUL R. TINDALL, of Greensburg, will remove to Shelbyville in the course of a few weeks, where he will be associated with his father, Dr. Charles H. Tindall, in the practice of medicine.

ON Wednesday night, June 29, the offices of Drs. M. F. Porter, Sr., M. F. Porter, Jr., and B. P. Weaver, of Fort Wayne, were entered and robbed, the loss being estimated at thirty-five dollars.

DR. and MRS. H. A. KINNAMAN have moved from Danville, Indiana, to Crawfordsville, Indiana, where Dr. Kinnaman has opened his office in the Ben Hur Building for the practice of medicine.

DR. LYMAN OVERSHINER, of Columbus, Indiana, who has been taking special work in diseases of the ear, nose and throat at a Chicago clinic for the past several weeks, has returned home and resumed his practice.

DR. OKLA W. SICKS, house physician at the French Lick Hotel, was married July 14, 1921, to Miss Norma Jane Sutton. After a short stay at Lake Wawasee, they will be at home at the French Lick Hotel.

DR. THOMPSON R. RICE and family, of Petersburg, left early this month for a motor trip to California. They expect to spend the winter in the West and Dr. Rice will do postgraduate work while there.

THE license of Dr. A. A. Hill, of Indianapolis, was revoked on July 14 by the State Board of Medical Registration and Examination, after he had been convicted in the Marion Criminal Court of performing an illegal operation.

DR. D. S. QUICKEL, of Anderson, Indiana, and Miss Bertha I. Davis, of Phoenix, Pa., were married Thursday, July 21. After September 1, Dr. Quickel and his wife will be at home at 2204 Noble street, Anderson, Indiana.

DR. OMER WOOLRIDGE, of Indianapolis, former director of the United States health clinic at Evansville, has been succeeded by Dr. R. R. Acre, of Indianapolis. Dr. Woolridge has been transferred to Chicago.

DR. GEORGE I. INLOW, of Blue Ridge, has been appointed coroner of Shelby County by the Shelby county board of commissioners, to succeed Dr. B. G. Keeney, of Shelbyville, who has resigned to take up other work.

DR. J. W. KANNEL, of Fort Wayne, was made first vice-president of the National Eclectic Medical Association at the annual session held at Colorado Springs. The next session of the association will be held in Indianapolis.

THE Medical Department of the Navy has planned the construction of an enlarged hospital at San Diego, California, at a total cost of \$1,975,000. The city of San Diego has donated additional land for the proposed new hospital.

DR. O. R. LYNCH and wife have returned to Peru, where Dr. Lynch will resume his practice, after an extended tour of the West. While absent Dr. Lynch took postgraduate work at several of the leading medical institutions.

DR. J. B. MAXWELL, who for the past two years has been practicing medicine in Warsaw, Indiana, has returned to Lucerne, where he will assume the duties of Dr. S. E. Jones. Dr. Jones will go to Chicago to continue his medical studies.

DR. RAGAL R. ACRE, resident physician at the Indianapolis City Hospital, has been appointed director of the United States Public Health Service in the Evansville district. Dr. Acre is a graduate of the Indiana University School of Medicine.

DR. J. E. HIATT, formerly of Newcastle, who recently removed to San Antonio, Texas, because of ill health, is seriously ill with heart trouble at the home of relatives in Sheridan, Indiana, where he was taken after he was stricken with the illness.

FIFTY physicians were in attendance at the annual session of the Seventh District Medical Society at Franklin, Indiana, on July 6, 1921. Addresses were given by Drs. L. P. V. Williams, T. C. Kennedy, J. L. Tierney, Louis H. Segar and J. S. Ragan.

DR. J. THERON SHORT, after a year of special work in the Johns Hopkins Hospital at Baltimore, has associated himself with the clinic now being established in Fort Wayne by Dr. H. A. Duemling, where he will have charge of the department of urology.

DR. B. W. RHAMY announces the removal of the Fort Wayne Medical Laboratories from the Gauntt Building to 327 West Berry street, where a new giant x-ray apparatus will be installed. The new laboratories will be thoroughly modern in every respect.

THE Medical College of Fordham University passed out of existence on Thursday, June 16th, after the graduation of the 1921 class. The college has had a deficit for the sixteen years it has been in operation, averaging \$21,429 yearly.

TWENTY-FIVE counties were represented at the meetings of the Indiana Tuberculosis Association, held in Indianapolis July 1 and 2. Miss Grace M. Osborne, of New York, assistant national crusade director, was in charge of the sessions.

THE Fort Wayne service station of the Victor X-ray Corporation has been discontinued. New offices have been opened at 917 Fletcher Savings and Trust Building, Indianapolis, under the direction of M. C. Olson, who is territorial sales distributor for this community.

IT has been announced by Surgeon-General Ireland of the Medical Department of the Army that forty-three of the forty-seven reserve officers of the Medical Corps will be retained on active duty to care for the war risk patients now being treated in army hospitals.

DR. J. B. MAXWELL, who has been practicing medicine in Atwood, Indiana, has removed to Lucerne, where he has taken over the practice of Dr. S. E. Jones. Dr. Jones is taking postgraduate work in Chicago and will locate elsewhere after he completes his work.

THE increase of pellagra in the South, as recently reported in the statistics of the United States Public Health Service, show that there may be twice the number during the present year as compared to last year, and in some places the previous records may be tripled.

DRS. C. E. LEEDY and C. R. LONG entertained the members of the Kosciusko County Medical Society and the Whitley County Medical Society on June 28 at a banquet given in Pierceton. An address was given by Dr. Allen Hamilton, of Fort Wayne, on the subject "High Blood Pressure".

NEW buildings and additions are to be added to the National Home of Lepers at Carville, La., which is owned and controlled by the United States government through the United States Public Health Service. Improvement expenditures amount to \$68,833 and include the erection of seven cottages.

DR. ROSS OTTINGER, of Indianapolis, was elected president of the Seventh District Medical Society for the coming year at the annual

session held in Franklin, Indiana, July 6, 1921. Dr. Bernard J. Larkin was made secretary-treasurer. The next meeting of this society will be held at Indianapolis, in October of 1922.

DRS. A. H. UNTHANK, of Marion, and KATHRYN M. WHITTEN, of Fort Wayne, have purchased the residence at 343 West Wayne street, Fort Wayne, which they will remodel for occupancy as a home and office. Dr. and Mrs. A. E. Fauve, from whom the site was purchased, have returned to France, where they will locate permanently.

It has been announced by the Rockefeller Foundation that a contribution of \$35,000 has been made to New York University to provide a clinic in the new building which the university is erecting. A branch laboratory of the New York State Department of Health will be housed in the new building. This gift supplements the contribution of three hundred fifty thousand dollars made last year by the General Education Board.

DR. ALFRED S. BURDICK has been elected president of the Abbott Laboratories to succeed the late Dr. W. C. Abbott. Dr. Burdick is a graduate of the Alfred University, Alfred, New York, and of Rush Medical College, Chicago. He has been associated with the Abbott Laboratories for a period of seventeen years, and for a number of years has served as vice-president and assistant general manager.

DR. BAILLON, of the Faculty of Medicine of Paris, has come to America for the purpose of revealing the seriousness of the tuberculosis conditions in France, and to seek members for the Franco-American Committee to Fight Against Tuberculosis. He reports that there are 1,900,000 cases of tuberculosis in France, with only 10,000 available beds for the invalids, and that the deaths have reached 20,000 yearly.

THE following officers were elected for the ensuing year at the thirty-third annual meeting of the American Pediatric Society held in Swampscott, Massachusetts, June 2, 3, and 4, 1921: President, Dr. Maynard Ladd, of Boston; vice-president, Dr. Percival J. Eaton, of Pittsburgh; secretary-treasurer, Dr. Howard C. Carpenter, of Philadelphia; editor and recorder, Dr. Joseph Brennemann, of Chicago.

THE director of public welfare of the Post Office Department, L. F. Krankel, has made arrangements with the American Red Cross for the organization of classes in first aid in the post offices of the country. Instructors will be sent around through the country for the purpose of

instructing postal employees in the use of first aid kits, which will be supplied at cost. The plans of public welfare in this department have been approved by Postmaster General Hays.

DR. WALLACE CALVIN ABBOTT, founder and president of the Abbott Laboratories, died July 4 at his home in Chicago. Dr. Abbott had done extensive research work along the line of new medicinal chemicals and was author of a number of medical books. He also was editor-in-chief of the *American Journal of Clinical Medicine*. He had been president of the Abbott Alkaloidal Company and the Abbott Laboratories since their establishment more than thirty years ago.

THE Sheppard-Towner Bill (for the protection of maternity and infancy) passed the Senate July 22, but failed to pass the House of Representatives. Extended hearings have been held in the House Committee on Interstate Commerce relative to the merits of the bill, which provides for cooperation between the federal government and the states and authorizes the expenditure of \$1,480,000 in establishing centers of information on the subject of infant hygiene and maternity.

A SUM amounting to \$360 for the encouragement of research work by pharmacists, will be available after October 1, 1921, from the American Pharmaceutical Association. Communications concerning financial assistance should be sent to Prof. H. V. Army, chairman, American Pharmaceutical Association Research Committee, 115 West Sixty-eighth street, New York, before September 1. Communicants should give their past record and outline of the particular line of work for which the aid is desired.

THE Tenth District Medical Society was entertained on July 19 by the members of the Jasper-Newton Counties Medical Society, at Hazelden. About sixty-five doctors attended. During the course of the program for the day the following addresses were given: "The Diagnosis of Acute Abdominal Infections," by Dr. Peter S. Clark, of Chicago; "Treatment of Fractures," by Dr. Dean Lewis, of Chicago; and "Diagnosis and Treatment of Hyperthyroidism," by Dr. J. A. MacDonald, of Indianapolis.

In addition to the articles enumerated in our letter of July 1st, the following articles were accepted during June: Lederle Antitoxin Laboratories—Pollen Antigen-Lederle (Ragweed). Pollen Antigen-Lederle (Timothy).

During July the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial

Remedies: The Abbott Laboratories—Argyn. Hoffman LaRoche Chemical Works—Papaverine Sulphate Tablets—Roche. Nonproprietary Articles—Casein.

GOVERNOR W. T. McCRAy recently announced the appointment of a State Board of Examination and Registration of nurses in compliance with the 1921 act. The members, five in number, are: Miss Catherine McManus, Indianapolis, St. Vincent's Hospital; Miss Nellie Brown, Indianapolis, Robert W. Long Hospital; Miss Mary Louise Happel, Walker Hospital, Evansville; Miss Elizabeth Springer, superintendent of the Huntington Hospital, Huntington; and Miss Ida McCaslin, Martinsville, Morgan County health nurse.

DR. JAMES A. GRAHAM and family, of Hammond, sailed for Vienna on July 14, where Dr. Graham will study under Professor Antone V. Eiselberg, head surgeon of the University of Vienna, for a year before returning to America. On the trip to Vienna Dr. Graham will visit Rome, Naples, Florence, Milan and other cities, and while in Vienna will give his attention to general surgery. Dr. Graham goes with a party of forty surgeons from this country who are exchanging with an equal number of scientific men from the accredited laboratories of Austria-Hungary.

REPORTS relative to injurious accidents caused by the operation of the roentgen-ray apparatus may be addressed to any of the members of the recently appointed Safety Committee of the American Roentgen-Ray Society. This committee was appointed for the purpose of giving consideration and correct data regarding these injuries, which information will be used in determining the cause of accidents and best means of preventing them. The members of the new committee are: Drs. W. D. Coolidge, Schenectady, N. Y.; Preston M. Hickey, Detroit; Henry K. Pancoast, Philadelphia; George W. Holmes, Boston; J. S. Shearer, Ithaca, N. Y.; or the secretary, Miss Doris Keeler, Rockefeller Hall, Ithaca, N. Y.

CORRESPONDENCE

MISSING

DR. WILLIAM RAY ELY, a physician, disappeared from Chicago, Illinois, in October, 1912. He graduated at the College of Physicians and Surgeons, Chicago, Illinois, in 1909, practiced medicine, and made his home in Gibson City, Illinois. He was born in Mazon, Illinois, in 1879, and is now about 42 years of age.

Height 5 feet 9 inches, dark complexion, brown hair and brown eyes.

He left a wife and four children, and his family has not heard from him since his disappearance.

The undersigned will appreciate any information concerning Dr. Ely which may lead to his location and identification, and will be glad to treat communications in reference thereto as strictly confidential.

DAYTON & BAILEY,

Attorneys and Counselors at Law,
84 William Street, New York City.

ANNUAL SESSION OF AMERICAN HOSPITAL ASSOCIATION

LAFAYETTE, INDIANA, July 18, 1921.

To the Medical Profession of Indiana:

The American Hospital Association has done Indiana the honor of selecting West Baden for its annual meeting, September 12th to 16th, this year. This meeting should be of particular interest to all practitioners for we all have more or less use for the hospital, and especially to the physicians and surgeons who are staff members of these hospitals. We simply cannot do without hospitals and their appointments. Hence our interest in hospital development ought to be paramount. It is estimated that of the 150,000 physicians in this country, 60,000 are on the staffs of these hospitals in some capacity.

The exhibit of hospital equipment and conveniences at this annual meeting will be of unusual value and interest, and well worth the trouble of attending the meeting. The papers to be read promise to be of unusual excellence.

The new Indiana Hospital Association, composed of staff members as well as executives, will act as host for the occasion. Therefore, may I call particular attention to this meeting and urge physicians and surgeons in general, and staff members in particular, to take a few days off and attend the meeting of the American Hospital Association at West Baden, September 12th to 16th.

Fraternally,

GEORGE F. KEIPER, President,
Indiana Hospital Association.

Investigation by the U. S. Public Health Service show that practically all bottle-fed babies thrive as well on powdered milk as they do on natural cow's milk; and that some who do not thrive on the cow's natural milk do finely on the powdered. The National Commission on Milk Standards urges health and food-control officials to encourage and not to hamper the dried milk industry.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8
22.	Fulton	A. E. Stinson	15	17

INDIANA STATE MEDICAL ASSOCIATION

The Program Committee has announced the following list of papers for the annual session of the Indiana State Medical Association, to be held at Indianapolis, September 28, 29, and 30, 1921:

- President's Address.
- Symposium: Ulcer of the Stomach and Duodenum.
 - Etiology and Pathology, B. W. Rhamy, Fort Wayne
 - Diagnosis and Medical Treatment, W. H. Foreman, Indianapolis
 - Indications for Surgical Treatment, T. B. Noble, Indianapolis
 - Surgical Technique (Lantern Slides), J. R. Eastman, Indianapolis
 Discussants: Miles F. Porter, Fort Wayne
A. B. Graham, Indianapolis
W. D. Asbury, Terre Haute
E. D. Clark, Indianapolis
- Treatment of Chronic Nephritis, Chas. P. Emerson, Indianapolis

Discussants: G. W. McCaskey, Fort Wayne
E. F. Kiser, Indianapolis
- Operative Injuries to the Gall Ducts: Causation and Repair—Slides, H. K. Bonn, Indianapolis

Discussants: H. O. Shafer, Rochester
Goethe Link, Indianapolis
- Cecal Tuberculosis—Slides, W. H. Baker, South Bend
M. W. Lyon, Jr., South Bend

Discussants: Vance A. Funk, Vincennes
J. H. Eberwein, Indianapolis
- Local Anesthesia as a Supplement to General Narcosis, M. N. Hadley, Indianapolis

Discussants: A. C. Arnett, Lafayette
Frank Armstrong, Danville
- Conclusions from My Experience in Appendicitis, James Y. Welborn, Evansville

Discussants: H. W. McDonald, Newcastle
G. D. Scott, Sullivan

- Notes on the Treatment of Septic Infection Following Delivery or Abortion, A. S. Jaeger, Indianapolis

Discussants:

- Jos. H. Weinstein, Terre Haute
Frank S. Holland, Bloomington
- Non-Tuberculous Infection of the Kidney—Slides, P. E. McCown, Indianapolis

Discussants: Chas. E. Barnett, Fort Wayne
Bernard Erdman, Indianapolis
 - Cystica Fibrosa, J. H. Oliver, Indianapolis
V. H. Moon, Indianapolis

Discussants: Chas. M. Mix, Muncie
Frank B. Wynn, Indianapolis
 - The Treatment of Cancer of the Uterine Cervix, Stanley A. Clark, South Bend

Discussants: Grace Line Homan, LaPorte
George Kohlstadt, Indianapolis
 - Some Notes on the Surgery of the Mandible—Slides, W. D. Gatch, Indianapolis

Discussants: W. R. Davidson, Evansville
J. C. Sexton, Rushville
 - The Treatment of Club Feet, H. R. Allen, Indianapolis

Discussants: M. I. Rosenthal, Fort Wayne
G. D. Marshall, Kokomo
 - Sterility in the Female, G. B. Jackson, Indianapolis

Discussants: Arnold Province, Franklin
O. G. Pfaff, Indianapolis
 - The Treatment of Compound Fractures, E. B. Mumford, Indianapolis

Discussants: H. O. Bruggeman, Fort Wayne
L. A. Ensminger, Indianapolis
 - Traumatic Abdominal Injuries, W. C. Kennedy, Newcastle

Discussants: E. C. Davidson, Lafayette
W. P. Williams, Lebanon
 - Some Professional Shortcomings (Chairman's Address—Eye, Ear, Nose and Throat Section), W. A. Hollis, Hartford City
 - Report of a Case of Bezold's Mastoiditis Preceded by Thirty Years of Middle Ear Suppuration, C. N. Howard, Warsaw
 - Some Phases of the Trachoma Question, J. N. Stucky, Lexington, Ky.
 - What the General Practitioner Can Do in Otology, D. O. Kearby, Indianapolis
 - The Clinical Picture of Streptococcic Osteomyelitis of the Temporal Bone, Harry Boyd-Snee, South Bend
 - Ludwig's Angina, Complicating a Case of Suppurative Parotitis. With presentation of a case, W. F. Molt, Indianapolis
 - Theory and Practice of Immunology, James L. Gilbert, Logansport

Discussants: B. W. Rhamy, Fort Wayne
Frank B. Wynn, Indianapolis
 - Epidemic Encephalitis, W. A. Fankboner, Marion

Discussants: E. O. Daniels, Marion
Clay Ball, Muncie

25. Foreign Bodies Within the Respiratory Tract as Causative Factors in the Production of Pathological Conditions.

Maurice H. Krebs, Huntington

Discussants:

Alfred Henry.....Indianapolis
C. A. Sellers.....Hartford City

26. Eclampsia.....Jane Ketcham, Indianapolis

Discussants:

F. R. Clapp.....South Bend
Chas. S. Bond.....Richmond

27. Functional Nervous Disturbances in Soldiers and Civilians.....Chas. G. Beall, Fort Wayne

Discussants:

W. D. Asbury.....Terre Haute
John Gilpin.....Fort Wayne

28. Some Problems in Syphilis.

R. V. Hoffman, South Bend

Discussants:

A. W. Brayton.....Indianapolis
Wm. S. Ehrich.....Evansville

29. Infections of the Gall Bladder,

John W. Sluss, Indianapolis

Discussants:

W. D. Asbury.....Terre Haute
W. C. Heilman.....Newcastle

30. The Physical Inequality of School Children.

George W. Spohn, Elkhart

Discussants:

Ada E. Schweitzer.....Indianapolis
George W. Cring.....Portland

31. Professional Efficiency in the Hospital.

Chas. S. Woods, Indianapolis

Discussants:

H. G. Hamer.....Indianapolis
A. C. Kimberlin.....Indianapolis

SEVENTH DISTRICT

The Seventh District Medical Society was called to order in the Assembly Room of the Public Library at Franklin at 3 o'clock on July 6 by the president, Dr. Edgar F. Kiser.

Minutes of the previous meeting were read and approved. The report of the secretary-treasurer also was read and accepted. The president appointed the following nominating committee: Drs. T. C. Kennedy, Indianapolis; O. T. Seamahorn, Pittsboro; and J. F. Ragan, Plainfield. Upon the recommendation of this committee, Dr. R. C. Ottinger, of Indianapolis, was elected president, and Dr. B. J. Larkin, also of Indianapolis, was elected secretary-treasurer. The 1922 meeting is to be held in Indianapolis.

Dr. David Ross, president of the Indiana State Medical Association, addressed the Society.

Dr. T. C. Kennedy of Indianapolis presented the first paper on the program, his subject being "The Cancer Problem". Dr. Luke P. V. Williams of White-land read a paper on "The Toxicology of Tobacco" which brought forth much discussion. "Diseases of the New Born" were discussed by Dr. Louis H. Segar of Indianapolis; and an interesting report of an Epidemic of Gastro-Enteritis at the Indiana Boys' School was given by Dr. J. S. Ragan, Plainfield. Dr. J. L. Tierney of St. Louis, Mo., gave an illustrated lecture on "Diagnostic Signs of Diseases of the Ductless Glands".

A chicken dinner was served at one of the local cafes.

The evening program consisted of the address of the president, Dr. Edgar F. Kiser, Indianapolis, and a paper on "Recent Surgical Progress" by Dr. William E. Gabe of Indianapolis.

Adjourned.

BERNARD J. LARKIN, Sec'y.

TENTH DISTRICT

The Tenth District Medical Society met at Hazel-don, Brook, Indiana, on July 19, at 2 p. m.

The first paper on the program was read by Dr. Peter S. Clark, of Chicago, on "The Diagnosis of Acute Abdominal Infections". The paper of necessity covered a wide range of diseases. The essayist presented the latest in diagnosis of the classical symptoms, paying especial attention to the more common ones. The general discussion which followed brought some differences of opinion as to the treatment of pancreatitis.

The second paper dealt with the subject of Fractures, and was presented by Dr. Dean Lewis of Chicago. Dr. Lewis' discussion of the subject was very practical. He enumerated a few cases of non-union over which there is no control, but thinks failure in the treatment of many fractures is due to failure to study the action of the muscles involved and the shape of the fracture. Description was given in detail of the treatment of a number of the more common fractures, and, in cases of fractures of the arm, much stress was laid upon the importance of examining and making note of the condition of the radial pulse that injuries to the blood vessels may be detected early, thus adding much to the protection of the surgeon. The paper was freely discussed.

The program was so arranged as to give the members opportunity from four to six p. m. for a round of golf, a plunge in the pool, or any other recreation desired. At six o'clock the ladies of the Brook U. B. Church served a chicken dinner, following which Dr. John A. Macdonald of Indianapolis read a paper on the Diagnosis and Treatment of Hyperthyroidism, enumerating all of the delicate points in diagnosis and the various tests to be used. He stated that from 60 to 70 percent of these cases are self-limited, thus accounting for a large percent of the so-called cures. X-ray and rest was advocated for the borderline cases, and surgery for the advanced cases. He urged that food be regulated by the metabolic rate.

Officers for the ensuing year were elected as follows: President, Dr. A. R. Kresler, Reusselaer, and secretary, Dr. O. E. Glick, Kentland.

Attendance, 65. Adjourned.

O. E. Glick, Secretary.

ELKHART COUNTY

The members of the Elkhart County Medical Society met at The Tavern, Christian Lake, near Elkhart, on July 1, and tendered a banquet to Drs. I. J. Becknell and M. K. Kreider, both of Goshen, in honor of their 75th birthdays. Dr. Becknell and Dr. Kreider have practiced medicine in Elkhart county for fifty years.

Dr. Charles W. Frink acted as toastmaster, and speakers of the evening were Drs. D. L. Miller, Goshen, and I. W. Short of Elkhart. Dr. G. W. Spohn, in the name of the Society, presented a gift to each of the honor guests. Both Dr. Becknell and Dr. Kreider had many reminiscences and stories to relate. Mrs. George Dewey and Mrs. I. J. Markel entertained the Society with musical selections.

S. T. MILLER, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NON-OFFICIAL REMEDIES

ORTHOFORM.—**ORTHOFORM NEW.**—**METHYL METAMINOPARA-OXYBENZOATE.**—Orthoform is a local anesthetic which penetrates the tissues very slowly on account of its insolubility. It has no action on the unbroken skin. It is practically non-toxic in the usual doses. Orthoform is used internally to relieve the pain of gastric ulcer. It has been applied locally as an analgesic to wounds of every description. It has been used in dentistry, in nasal catarrh, hay fever, etc. H. A. Metz Laboratories, Inc., New York.

AMIDOPYRINE.—**PYRAMIDON.**—Amidopyrine is closely related chemically to antipyrine. Amidopyrine acts as an antipyretic and anodyne, like antipyrine, but is effective in smaller doses. The action, while somewhat slower at the beginning, is more lasting. It is claimed to be comparatively free from harmful influences on the blood, heart and kidneys. It is said to be useful in the chronic fevers of tuberculosis, as well as in the acute febrile conditions of typhoid fever, erysipelas and pneumonia. In the treatment of infectious fevers it, like other antipyretics, should be cautiously employed. Dosage: from 0.3 to 0.4 gm.

AMIDOPYRINE-CALCO.—A brand of amidopyrine N. N. R. Calco Chemical Co., Boundbrook, N. J.

MESOTAN.—**SALMESTER.**—**METHYL-OXYMETHYL SALICYLATE.**—Mesotan is an active counter irritant, used especially in rheumatic conditions similarly to the local application of methyl salicylate. It is more irritant than the latter and lacks its odor. It is absorbed from the skin, but its action is predominantly local, relieving pain and swelling. It is not an efficient means of producing the systemic actions of salicylates. Winthrop Chemical Co., New York. (*Jour. A. M. A.*, July 2, 1921, page 41).

ARGYN.—A colloidal compound of silver oxid and serum albumin, containing from 25 to 30 percent of silver. The silver is in a form not readily ionizable. Argyn has the actions and uses of silver protein preparations of the argyrol type (see New and Non-official Remedies 1921, p. 330). It is employed in from 10 to 25 percent or stronger "solutions" (colloidal suspension). The Abbott Laboratories, Chicago, Ill.

CASEIN.—**CASEINAS.**—The protein separated from milk by the action of acids or enzymes and purified. It contains not less than 15 percent of nitrogen, calculated on the moisture free material. Casein is used as a food, being added to other ingredients of the diet when it is desired to increase the content of protein in the diet. This occurs occasionally in the feeding of infants, in the nutrition of adult convalescents and undernourished persons, and in the dietotherapy of diabetes. Casein is also used in the preparation of special foods for diabetics or others for whom a regimen poor in carbohydrate and fat may be desired. When incinerated, casein should not yield more than 2 percent of ash. It should contain not more than 10 percent of moisture and not more than 1 percent of fat.

PAPAVERINE SULPHATE TABLETS-ROCHE.—Each tablet contains 0.04 Gm. papaverine sulphate-Roche (see New and Nonofficial Remedies 1921, p. 211). Hoffmann LaRoche Chemical Works, New York. (*Jour. A. M. A.*, July 23, 1921, page 287).

PROPAGANDA FOR REFORM

PROCAL DERMATITIS.—Dermatitis following the use of procain has been reported. The treatment is palliative and includes removal of the etiologic factor. (*Jour. A. M. A.*, July 30, 1921, p. 395).

A NUXATED VICTORY.—It was Nuxated Iron that enabled Mr. Jess Willard to wrest the championship from Mr. Jack Johnson, and the same marvel made it possible for Mr. William Harrison Dempsey in turn to administer the K. O. to Mr. Willard. It was inevitable, therefore, that the French champion should be defeated by Dempsey in the recent fight. And now newspaper advertisements describe how "Nuxated Iron" helped "Jack" Dempsey to whip Carpentier. One wonders what would have happened had Dempsey taken the "Nuxated Iron" course previous to our entrance into the World War. (*Jour. A. M. A.*, July 9, 1921, p. 130).

CHAULMOOGRA OIL IN LEPROSY.—There remains little doubt that a potent remedial agent for leprosy resides in some of the fatty acids that can be separated from chaulmoogra oil. The first larger group of successful cases were treated with the mixed ethyl esters of chaulmoogra oil acids carrying 2 percent of iodine in chemical combination. Intramuscular injections were supplemented by oral administration of a similar product. In later series the iodine was omitted without noteworthy difference in the favorable outcome of the treatment, and the oral administration has been discontinued because it gave no added advantage with respect to the results obtained. Two definite constituents of chaulmoogra oil—chaulmoogric acid and hydnocarpic acid—have been separated and employed in the form of esters therapeutically with obvious success. (*Jour. A. M. A.*, July 23, 1921, p. 292).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the authorities charged with the enforcement of the Food and Drugs Act, because the curative claims made for them were held to be unwarranted: Gonosan (Riedel & Co., Inc.), a sandalwood oil preparation previously reported on by the Council on Pharmacy and Chemistry. C. C. Capsules (Evans Drug Mfg. Co.), containing a mixture of copaiba balsam and cubebs. C. G. Remedy (Allen-Pfeiffer Chemical Co.), essentially a solution of zinc salts, boric acid, eucalyptol, phenol and glycerin and an unidentified plant extractive. Pulmo Oil Compound Emulsion for the lungs (Callahan Chemical Co.), consisting essentially of sperm oil containing a small amount of methyl salicylate and alcohol. A. W. Chase's Nerve Pills (A. W. Chase Medicine Co.), consisting essentially of aloes, iron (ferrous) carbonate, arsenic, manganese and strychnin. (*Jour. A. M. A.*, July 9, 1921, p. 140).

SPIROCID AND THE INHALATION TREATMENT OF SYPHILIS.—Dr. H. N. Cole criticizes the claims made for Spirocid by the Spirocid Corporation. He points out that the inhalation treatment is not new but has been used since 1506 and has been given up by almost every trained syphilographer for many years because of the fact that it is not only irritating to the lungs but also dangerous and of uncertain dosage. Dr. Cole also comments on a card sent out by the Spirocid Corporation which shows a blood smear from a syphilitic patient containing Spirochæta pallida and Spirochæta refringens in rather larger numbers in comparison with the number of red cells shown. He states that it is a well known fact that even in secondary syphilis it is almost impossible to find Spirochæta pallida in the blood smears. In his many years of work with syphilis he has yet to see the blood smear from a case of secondary syphilis in which Spirochæta pallida were found and, he adds, why in such an occasion Spirochæta refringens should be seen only the Spirocid Corporation can explain. (*Jour. A. M. A.*, July 30, 1921, p. 394).

IRON AND ARSENIC IN ANEMIA.—In an elaborate research at the George William Hooper Foundation for

Medical Research in the University of California Medical School, the possible influence of iron salts and other substances supposedly stimulating regeneration of hemoglobin has been studied under carefully controlled conditions of feeding. The results show that iron in the form of Bland's Pills is inert when given under controlled conditions in anemia periods under the conditions of the experiments. Ferric citrate and the organic "ovoferin" gave no better results. Hemoglobin gave somewhat better results, but this effect need not be attributed to the iron in hemoglobin. Arsenic in the form of sodium cacodylate and as solution of potassium arsenite were also found inert. No drug tested compared with suitable dietary factors in securing a rapid regeneration of hemoglobin during anemia periods induced by simple hemorrhage. The results of this investigation give no support to the time honored custom of administering iron in simple anemia. The burden of proof for the value of iron salts (and of arsenic) in anemia now rests with those who claim that a given drug is potent in such conditions.—(*Jour. A. M. A.*, July 30, 1921, p. 379).

QUASSIA COMPOUND TABLETS.—These tablets, marketed by Flint, Eaton & Co., according to the label on the trade package submitted to the Council on Pharmacy and Chemistry, contain in each tablet: Quassia 3-4 grain, chionanthus 1 grain, waloo 3-4 grain, nux vomica 1-2 grain, cascara 1-3 grain, aloin 1-4 grain, ipecac 1-6 grain, podophyllin 1-4 grain, gingerine q. s. In the advertising "cascara" is replaced by the indefinite term "cascarin" and the "gingerine q. s." by "carminative antigripe q. s." Flint, Eaton & Co. informed the Council that "carminative antigripe" is sodium sulphite. The tablets were treated with dilute hydrochloric acid and the odor of sulphur dioxide became apparent. This shows that the company's statement to the Council that the tablets contain sodium sulphite is correct and that the formula on the label is incorrect. The Council declared Quassia Compound Tablets (Flint, Eaton & Co.) inadmissible to New and Nonofficial Remedies because: 1. They contain drugs of unproved value. 2. Their composition is needlessly complex, and, therefore, irrational. 3. Unwarranted therapeutic claims are made for them. 4. The name is misleading and not descriptive of their composition. 5. The statement of their composition is indefinite and incorrect.—(*Jour. A. M. A.*, July 9, 1921, p. 141).

OXYL-IODIDE NOT ADMITTED TO N. N. R.—Oxyl-iodide (Eli Lilly & Co.) is said to be the hydriodid of cinchophen, and the claim is made that it exerts the effects of cinchophen and of iodid. Because of inquiries which had been received, the Council on Pharmacy and Chemistry decided to determine the eligibility of Oxyl-iodide for New and Nonofficial Remedies. Dr. P. J. Hanzlik—formerly associate professor of pharmacology at Western Reserve University School of Medicine—now professor of pharmacology at Leland Stanford Junior University Medical School, who has made a study of cinchophen and of salicylates, was asked to report on the therapeutic value and the rationality of Oxyl-iodide. In his report Dr. Hanzlik brought out that the administration of Oxyl-iodide can have no advantage over the administration of cinchophen and iodid, that in most cases in which cinchophen is indicated iodide is not wanted, and that when the action of both iodide and cinchophen is desired this can be better obtained by the administration of cinchophen and sodium iodide, since it permits the proper regulation of the dose of each. After considering Dr. Hanzlik's report, the Council declared Oxyl-iodide inadmissible to New

and Nonofficial Remedies because it is an irrational combination marketed under claims that are unproved and consequently unwarranted.—(*Jour. A. M. A.*, July 2, 1921, p. 57).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, because the therapeutic claims made for them were held to be unwarranted: Hobo Kidney and Bladder Remedy (Hobo Medicine Co.), represented as a treatment or cure for Bright's disease, backache, rheumatism, inflammation of the bladder, etc. Anti-Pneumonia (John B. Cox), a tar preparation represented as a cure for bronchitis, acute inflammation and articular rheumatism and suppressed menstruation, and as a remedy for typhoid fever, diphtheria and measles. Gon-Kare (Gem Medicine Co.), consisting of a fluid for injection and tablets for internal use and represented as a remedy for gonorrhea and acute chronic cystitis. Potasul Potash Sulphur Water (Potash Sulphur Springs, Inc.), containing no appreciable amounts of potash and sulphur represented as a cure for diseases of stomach and bladder and kidneys. Short Stop Injection and Short Stop Capsules (Massman Chemical Co.), represented as a cure for gonorrhea and gleet and for leukorrhea, kidney and bladder affections, chronic seminal and mucus discharges. Fisher's Indian Remedy (Anthony Fisher Co.), tablets represented as an effective remedy, treatment, cure and preventive for indigestion, stomach trouble, sick and nervous headache, neuralgia, kidney and liver complaint, etc., etc. Santal Bowne (General Drug Co.), capsules of santal and cassia for the treatment of gonorrhea. Lallemand's Rheumatism, Gout and Neuralgia Treatment (Meyer Bros. Drug Co.), containing potassium iodid and colchicum and other drugs and represented as an effective preventive remedy and cure for acute and chronic rheumatism, neuralgia and locomotor ataxia. Robert J. Pierce's Empress Brand Tansy, Cottonroot, Pennyroyal and Apol Tablets (Robert J. Pierce Co.), represented as a safe emmenagogue and cure for the suppression of the menstrual function.—(*Jour. A. M. A.*, July 16, 1921, p. 219).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, for the reasons that the therapeutic claims made for them were unwarranted: Nerv-Mintz (Earl Chemical Co.), tablets containing essentially sabal, nux vomica, zinc phosphid, aloin and capsicum. Penslar Sancop Pearls (Penslar Chemical Co.), capsules containing oils and resins, including oil of sandal and cinnamon and copaiba and gurjun balsam. Lezajskie Lecznice Wino Elixir (Wojtasinski Chemical Co.), a water-alcohol solution containing rhubarb and a trace of cascara. Porose Pills (Lafayette Co.), consisting essentially of ferrous carbonate, nux vomica, a laxative plant drug, arsenic and plant extractives. Gold Medal Compound Pills (Ashland Supply House), consisting essentially of ferrous sulphate, aloes and oil of pennyroyal. Wade's Golden Nerveine (Gem Medicine Co.), pills consisting essentially of iron, phosphates, strychnin, damiana and gentian. Allan's Star Brand Pills (Allen-Pfeiffer Chemical Co.), consisting essentially of aloes, ferrous sulphate and starch. Cheeseman's Pills (Dr. Cheeseman's Female Regulating Pills-Kells Co.), composed essentially of aloes and ferrous sulphate. Dr. Gunn's Blood and Nerve Tonic (United Medicine Co.), tablets composed essentially of aloes, phospho-

(Continued on Advertising Page xxxvi)

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(Continued from Page 284)

rus and strychnin. Hooper's Female Pills (Horace B. Taylor Co.), consisting essentially of aloes and ferrous sulphate.—(*Jour. A. M. A.*, July 30, 1921, p. 393).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, for the reason that the therapeutic claims were held to be unwarranted: "Manhood Pills" (Phoenix Mfg. Co.), containing very small quantities of strychnin, zinc (probably as phosphid) and Cantharides, together with plant extractives from damiana. "Phoenix Tasteless Chill Cure" (Phoenix Mfg. Co.), a syrup containing quinin, sulphuric acid and plant extractives from senna and possibly licorice. "Spanish No-Kink or Hair Straightener" (Phoenix Mfg. Co.), a mineral jelly scented with citronella. "Phoenix Skin Success Ointment" (Phoenix Mfg. Co.), claimed to contain 10 percent mercuric oxid, consisting of mineral wax, talc and carbonate of lime scented with citronella and containing no mercury compound. Arthur's Sextone Tablets (Palestine Drug Co.), composed essentially of iron and zinc salts, caffein and unidentified plant extractives and traces of phosphates. Palmo Tablets (McCullough Drug Co.), tablets consisting essentially of plant extractives including damiana and nux vomica, iron phosphate and a small amount of phosphorus. Savatan (S. Pfeiffer Mfg. Co.), capsules containing essentially oils of tansy and mint and green apiol.

Parto-Glory (Partola Service Corporation), a solution containing essentially an iron salt, strychnin, quinin and potassium bromid. Damiana Compound with Saw Palmetto (Hollander, Koshland Co.), a solution containing damiana extractives, an iron (ferrie (salt and nux vomica alkaloids. Bick's Sextone Pills (Palestine Drug Co.), consisting of two pills, one consisting essentially of calcium carbonate, iron oxid, plant extractives and sugar, the other essentially finely divided metallic iron, nux vomica alkaloids and calcium carbonate. Lewis' Nerve Pills (A. H. Lewis Medicine Co.), consisting essentially of an iron salt, strychnin, phosphorus and unidentified plant extractives. Bick's Daisy 99 (Palestine Drug Co.), consisting essentially of a solution of sodium acetate and buchu in alcohol and water, with indications of extractives of cascara. Planten's Capsules (G. J. Fajardo), containing balsam of copaiba. San Methyl (Grape Capsule Co.), consisting essentially of copaiba, cubebs, oils of santal and cinnamon, methylene blue and phenyl salicylate. Pendleton's Vegetable Panacea (G. I. Robinson Drug Co.), essentially an alcoholic solution of red pepper, camphor, myrrh and oils of spearmint, thyme, cedar and cloves. Vagiseptic Dises (Palestine Drug Co.), consisting essentially of sodium chlorid, a small amount of alum, sugar, starch and talc. Arthur's Emmenagogue Pills and Leslie's Emmenagogue Pills (Palestine Drug Co.), both consisting essentially of iron (ferrous) sulphate, aloes and an unidentified alkaloid.—(*Jour. A. M. A.* July 23, 1921, p. 303).

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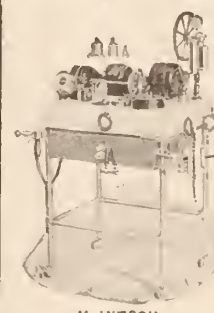
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SEPTEMBER 15, 1921

NUMBER 9

ORIGINAL ARTICLES

PROTEIN SENSITIZATION*

CHARLES S. BOSENBURY, M.D.
SOUTH BEND, INDIANA

Many individuals are abnormally sensitive to foreign proteins. This peculiar susceptibility has been designated protein sensitization. It is often responsible for bronchial asthma, hay fever, urticaria, eczema, anaphylactic shock and various gastro-intestinal disorders. The skin of an individual sensitized to a protein will show a definite reaction when that protein is brought in contact with even a small scratch. In a disease dependent upon protein sensitization, it is possible to determine the cause, and, by its elimination or withdrawal, to alleviate or cure the condition. Or, by desensitizing the patient, similar results are obtained.

Proteins are widely distributed in Nature. By various routes they are introduced into the body and, in susceptible individuals, there is an abnormal and unusual response, due to protein sensitization. This term includes the phenomena of anaphylaxis, allergy and food idiosyncrasy.

When a guinea pig is injected with the first dose of horse serum no symptoms develop. If, after a few days, a second injection be given, there is a very severe reaction, due to the fact that the first injection sensitized the animal to the serum. This acquired sensitization was termed by Richet "anaphylaxis." Clinically it was found that occasionally a similar reaction follows the injection of antitoxic sera. This is true anaphylaxis, since it depends upon the introduction of foreign protein. In some ways, reactions which have followed the administration of such drugs as quinine, arsphenamine and acetylsalicylic acid, resemble those of anaphylaxis. Very few of the drugs concerned, however, are protein bodies, and anaphylaxis, strictly speaking, is hypersensitiveness to foreign proteins. Hence, it has been suggested that non-protein reactions be designated "anaphylactoid reactions." Some confusion exists

with reference to the term "allergy." Originally it referred to artificial sensitization; now it is frequently used to designate natural susceptibility to foreign protein. Richet has lately proposed that the term "alimentary anaphylaxis" be substituted for "food intolerance" or "food idiosyncrasy," because it indicates the true nature of the condition.

The administration of diphtheria and other antitoxic sera may be followed by anaphylactic shock, within a few minutes after the first and only injection of serum. There is restlessness, dyspnea, cyanosis, cardiac weakness and great fall of blood pressure, acute urticaria, and frequently sudden death. Or, a milder group of symptoms, described by von Pirquet and Schick as "serum sickness," may develop, characterized by urticaria, edema and fever, usually coming on eight to ten days after the first injection. There is a difference between experimental and clinical anaphylaxis. In animals it is necessary to render them sensitive by preliminary injection, while in man, anaphylaxis may and usually does occur as a result of natural sensitiveness to horse serum.

There are many clinical types of protein sensitization due to other than serum reactions. They are far more common, being dependent upon proteins derived from food, pollens, animal epidermis and bacteria.

It has been estimated that one in every ten persons is susceptible to one or more proteins. Predisposition to protein sensitization is apparently inherited, as approximately fifty per cent of sensitive individuals give a history of similar susceptibility on the part of one or both parents.

The fact that some individuals are rendered ill or seriously inconvenienced by certain foods has long been realized. "One man's meat may be another's poison." Food intolerance occurs frequently in children. Older patients may be sensitive to foods, but are more often susceptible to other types of proteins. Susceptibility to milk and eggs is very common, but is also shown to meats, fish, cereals and fruits. It is of interest to note that some infants are sensitive to human milk. The symptoms of food

*Read before the Medical Section of the Indiana State Medical Association at the South Bend Session, September, 1920.

intolerance vary. Often there is gastrointestinal disturbance, and this may be associated with asthma, bronchitis, eczema, urticaria, angioneurotic edema or spasmodic croup. Or, the digestive tract may escape, and the symptoms are referable to the respiratory tract, the skin or nervous system. Generally there is evidence of food idiosyncrasy soon after the ingestion of the offending food but there may be a delay of several days. In very sensitive patients the reactions may be acute and severe, resembling anaphylactic shock. Usually they are milder and more chronic. When a patient shows food intolerance the symptoms are not characteristic of any one food. Milk, wheat or bananas may cause much the same picture. Some hint may be given by a history of eating unusual food. In older patients repeated attacks may have occurred, as illustrated by an annual outbreak of urticaria, due to buckwheat or strawberries. However, the actual cause of intolerance may generally be demonstrated by the cutaneous test.

Hay fever is most frequent in the late summer and early fall months, but may occur at other times of the year in different climates, depending upon the susceptibility of an individual to various pollens. While bacteria may increase the intensity of the disease, or cause a patient to become susceptible to it, hay fever is generally due to pollens, although Walker recently has described what he terms "perennial hay fever," due to other types of proteins.

Asthma may be due to any of the four groups of proteins. As a rule, according to Walker, young asthmatics are sensitive to food proteins. It may be interesting to know that many patients develop asthma under the age of five years, and approximately 85 per cent of these are protein-sensitive. Older patients, while showing food reactions at times, are more commonly susceptible to keratinoid, bacterial and pollen proteins. Wheat is the most common food to cause asthma, then eggs, fish, potato, casein and other foods less frequently. Of the animal emanations, the protein of horse hair is the most frequent cause. Epidermal proteins for cutaneous tests and treatment have been prepared from horse hair, cat hair, chicken feathers, dog hair, goose feathers, mouse hair, rabbit hair and sheep wool. There are about thirty pollen proteins available for tests and treatment: of these, timothy and ragweed give the most frequent reactions. Bacterial proteins may be responsible, as in cases of focal infection. Here bacteria are harmful, not only because of their infectiousness, but also because of their protein elements. Not all cases of asthma are caused by protein sensitization. Many are non-sensitive and such are due to bacterial infection.

Eczema, particularly infantile eczema, is frequently due to protein sensitization. Taking the reported cases of three observers, Talbot, Schloss and Blackfan, who report a total of eighty cases, 49 reacted to eggs, 33 to cow's milk, 13 to human milk, 8 to barley, 9 to horse serum, 9 to meat extract, and to other foods less frequently. Some of the patients showed multiple sensitization.

When protein sensitization is suspected, it becomes necessary to determine the cause. This is done by means of cutaneous tests with suspected proteins. Purified proteins are supplied in powdered form, or in solution. The powdered proteins are soluble in decinormal sodium hydroxide solution. A control test is made by a small scratch through a drop of the alkali solution. Then in turn similar scratches are made and the powdered proteins are mixed with the alkali solution, so that they may be dissolved and come in contact with the patient's serum. The occurrence of a wheal, at least 0.5 cm in diameter, irregular in outline and surrounded by a reddened areola, constitutes a positive reaction. This usually appears in from five to forty-five minutes. If no wheal develops, the reaction is negative. All doubtful or suspicious reactions should be considered negative and the test repeated. In testing protein reactions one must bear in mind that occasionally a patient may be temporarily in a condition of antianaphylaxis or desensitization, during which time the toxic food may be eaten or contact with other proteins occur, and when a reaction may not be obtained with the skin test. This indicates the necessity of repeated tests in suspected cases. Interference with the tests may occur as a result of marked sensitiveness of the skin, that is, false reactions may be obtained. On the other hand, the clinical evidence may indicate protein sensitization and the skin lack sufficient sensitiveness to give positive results.

The question whether normal individuals would respond to skin tests has been investigated by Baker of Harvard. His studies indicate that the incidence of sensitization of apparently normal children is almost a negligible factor.

The prevention of protein sensitization may be possible. Anaphylaxis following the injection of therapeutic sera is generally dependent upon the protein of horse serum, since that animal is usually employed in producing antitoxin. Individuals sensitive to horse serum are therefore possible subjects for anaphylactic shock. Patients who have asthmatic tendencies, as well as those who have had serum injections ten to twelve days or longer prior to a second injection, should be tested for serum sensitiveness. This may be done with protein powder,

or one may give 0.1 cc of the antitoxic serum subcutaneously and, after an interval of two hours, if no untoward symptoms develop, the full dose may be injected.

Sicard has found that the therapeutic dose of an antiserum may be safely injected into the arm when the circulation is completely shut off for a few minutes.

Efforts to reduce the occurrence of anaphylaxis by refinement and concentration of antisera have not been altogether successful. It has been suggested that it might be well to prepare antitoxins from other animals than the horse for use in patients sensitive to horse serum.

Since many individuals inherit a predisposition to protein sensitization, it is well, in planning the dietary of a child, to do preliminary skin tests, whenever there is a history of hay fever, asthma or eczema in the direct ancestors. It may be possible to discover food peculiarities and thus prevent undesirable and harmful food reactions. Either the food to which the child is sensitive is not prescribed or desensitization may be practiced. The proper study of dietetics, therefore, in health and in disease, depends not only on food values, but at times on food reactions as well.

In individuals susceptible to proteins of pollens and animal emanations, change of residence or avoidance of contact with animals, their feathers or fur, are at times indicated. Bacterial proteins absorbed from focal infections are to be eliminated by proper treatment of such foci.

The active treatment of protein sensitization consists of withdrawal or elimination of the offending protein or desensitization or immunization. Treatment of food idiosyncrasy by eliminating the offending foods is simple, provided the patient is not sensitive to too many. It is important that the food is eliminated not only in a pure state but also as an ingredient of other preparations. This is particularly true of milk and eggs, which are so commonly used in various dishes. Many patients with food intolerance fortunately recover spontaneously. Walker is of the opinion that long continued abstinence from offending protein will automatically desensitize an individual for that protein.

Desensitization may be accomplished by hypodermic injection of increasing doses of the protein to which the patient is sensitive. This form of treatment is particularly applicable to diseases caused by pollens, as in hay fever and asthma. It is not generally practical to desensitize to foods in this manner, because of the difficulty of preparing sterile proteins in a soluble and non-irritating form. However, Weill relates that he has successfully treated 41 patients who showed intolerance to human

milk and to cow's milk, by subcutaneous injections of milk, using always the Besredka progressive method, first 0.5 cc., then 2 cc. an hour later, and not until after three hours the full dose of 5 to 10 cc. Human milk he injects raw; cow's milk is injected after boiling twenty minutes.

Immunization by feeding gradually increasing amounts of the offending protein or food until toleration is established has been shown to overcome food intolerance in a number of cases, especially to egg and milk. It has been shown that in some cases, where raw milk was not tolerated, boiled milk or milk powder was compatible.

Non-specific therapy is emphasized by French authors. Pagnicz reviewed the literature on peptone methods and finds that relief is temporary, but recommends that the American method of gradual desensitization is superior. However, the peptone methods are so simple that they encourage further research. No preliminary skin tests are necessary. Small and increasing doses may be administered by mouth, by rectum, subcutaneously and intravenously. In children the pancreatic ferment may also be required, as it seems to be the only one of the digestants which transforms albumin and annuls its anaphylaxis-producing properties. Nathan and Lesne report the successful treatment of egg idiosyncrasy by the daily administration of pancreatic extract. In one case the child took the remedy for two years: the other outgrew the intolerance to egg within a few months. In both cases the effect of the pancreatic extract was apparent for, upon its withdrawal there was a return of intolerance, which disappeared when the remedy was resumed.

Danysz believes that certain symptoms in disease are the result of anaphylaxis induced by bacteria. The focus for the production of bacterial proteins is in the intestines. Hence, by isolating bacteria from the patient's stools he was able to prepare what he terms "entero-antigens." These were administered by mouth and by injection. He reports his experience in 352 cases since 1913 and relates that ninety per cent were cured.

It would appear that the subject of protein sensitization, or anaphylaxis, if that term be preferred, is one of great practical as well as theoretical interest. Investigation of the condition has led to greater accuracy in diagnosis and actual cure or relief of many distressing conditions. It would be interesting if we could explain anaphylaxis. No satisfactory theory has been advanced. Theory may fascinate one, but the ultimate aim of the physician must be to apply whatever may be known for the benefit of his patients. The reports of investigators are encouraging. Within the past few years

much has been accomplished. The subject is comparatively new and will not appeal equally to medical men. There are, it is true, certain limitations. It requires painstaking care in making the tests and applying the treatment. The cost, in time and in money, is an item to be considered. However, there may come a time when added knowledge will lead to simplification of treatment and when the general practitioner may avail himself of definite and reliable means for the relief of the victims of protein sensitization.

DISCUSSION

DR. CHARLES SELLERS, (Hartford City): I want to concur with the Doctor and emphasize the importance of these allergic skin reactions. They are painstaking, it is true, but there is the possibility of their giving us a great deal of information in the care of our patients. One should feel a timidity in attempting to explain their cause. Much work, however, has been done recently in regard to the synthesis of the protein. Progressive medicine tends to show that this synthesis probably resides with the mother cells, especially the spleen and bone marrow. Also the cells of each specialized tissue, muscle, brain, and glands may on occasion synthesize each in its own special type of protein, using the amino-acid as building material.

Each tissue can also on occasion give out antitoxin ferments in response to specific toxins, but as a rule these tissues are shielded by the white and red blood corpuscles from the necessity of performing these functions. The activities of the cytogenic system leading to an increase in the number of blood cells, and the stimulus to the activities of the individual corpuscles and through these to the completed protein assimilation and immunization are all governed in part by harmonic stimuli, these harmones being derived from the glands of internal secretion. If this protein assimilation is incomplete a polypeptoid results which acts as a toxin influencing the chromaffin system, resulting in what is known as anaphylaxis. If we could realize that the chromaffin and adrenal system work in a synergetic manner, we probably could explain protein sensitization.

I think it is important to study the family history of these cases. In 85 per cent of my 25 cases I could demonstrate a very definite history of either a hypersensitiveness to some protein, or a history of some endocrine disturbance such as goitre, acromegalia, obesity, diabetes. I have an asthmatic patient whose family history shows very positive endocrine dyscrasia such as obesity, diabetes and goitre. His asthma came on while in Kentucky. He was 48 years of age at that time. When he came to me he was using about 3 ounces of

adrenalin hypodermically each 10 days. I would consider it impossible to get an allergic skin reaction with the constant use of adrenalin. In fact I have used a number of skin tests on him without getting a positive take. This case is unique in that there is but one case reported of Chronic Adrenalism. (Adrenalin in Asthma. A case of Chronic Adrenalism. By George H. Hoxie and H. T. Morris, Kansas City. Vol. 4, No. 1, P. 47.) In this case reported, the attempts made to reduce the adrenalin resulted in most alarming symptoms of impending death. Also it is unique in the fact that they were unable to obtain a reaction with non-specific vaccines (typhoid 50 millions). This would tend to show that anaphylaxis and allergic skin reaction are under the control of the chromaffin system. My patient is improving by the gradual withdrawal of the adrenalin, substituting morphine, and the use of neoarsphenamine, as the blood Wassermann was provoked from a (\pm) to a ($++$).

I would predict that if the allergic skin reactions were used and studied more, medicine would be wonderfully revolutionized. I have been wonderfully impressed with their aid in clearing up many cases which otherwise would have remained confusing.

DR. VIRGIL H. MOON (Indianapolis): In the brief time at my disposal it is impossible to attempt a detailed discussion of the character and mechanism of food idiosyncrasies and protein sensitization. One of the most convincing evidences of medical progress is the fact that men in clinical medicine are beginning to pay attention to protein sensitization as a phase of disease production with which they have to deal. Ten or fifteen years ago such subjects were not discussed except by scientists and investigators. Today you have heard a paper which detailed very accurately some of the more common manifestations of protein sensitization. This means that you as practitioners of general medicine are coming to realize the importance of protein sensitization as an explanation, and as a therapeutic means for the treatment of certain asthmatic conditions. You have probably come to understand food idiosyncrasies as set forth in the discussion this morning, but the full significance of protein intoxication in other phases of disease production probably has not been grasped by any of us.

That anaphylactic conditions are due to protein intoxication was discovered rather by accident, but investigators were not slow in pushing investigations on this relationship, and establishing a similar relationship in other groups of conditions. It was found that ordinary bacteria consist largely of protein; staphylococci, streptococci, colon bacilli and so on, consist of approximately 75 percent protein. If

the body has the capacity of becoming sensitized to protein and of reacting very markedly when such protein is introduced, is it not understandable that the body may likewise become sensitized to bacterial protein and become severely intoxicated by bacterial protein elaborated within it? Working in this line Vaughan and others have shown that they can produce in animals any type of fever they choose—the step-like progressive fever of typhoid, the rapid rise and sudden decline of temperature as in pneumonia—any type could be produced at will simply by injecting protein in carefully graded doses. The different types of fever were produced by varying the dosage and the intervals between injections. This was true regardless of the type of protein, whether it be egg albumin, horse serum, or protein of bacterial origin such as the colon bacillus. This experiment among others shows the very close analogy between infectious diseases and protein intoxication.

Furthermore, Vaughan found that, regardless of the type of protein, every protein contains in its chemical structure a toxic nucleus or split product which, when liberated by the chemical cleavage of the entire whole protein molecule, is one of the most potent poisons known. Vaughan believes that this toxic split product is identical in the various proteins. When foreign protein is introduced into the body or is formed by bacterial growth within the body, if there is within the system of the animal an enzyme which is capable of splitting that protein into its component parts or "building stones," one combination of these which is toxic is liberated and at once exercises its toxic effect upon the system. Do you not see then why so many infectious diseases are clinically similar? Why when the symptoms begin they are similar—the malaise, the weakness, the nausea, the rise in temperature, the rapid pulse, the headache and the presence of albumin and other pathological products in the urine? Why at autopsy the organs show similar changes regardless of whether the infecting agent has been pneumococcus, streptococcus, typhoid bacillus or whatever it may have been? If the toxic substance in the protein of the various bacteria is identical it would produce similar clinical symptoms and similar pathological changes in the tissues and organs.

In substantiation of the small amount of protein necessary to produce intoxication it was found that by rather crude chemical cleavage a single gram of casein furnished sufficient toxic split product to cause the death of 800 guinea pigs. It is likely that in the system such cleavage is performed much more accurately than in the test tube. In a sensitized guinea pig .000,000.1 gram of egg albumin has caused death. You probably recall seeing last

winter in the Journal of the American Medical Association the report of a physician on the attempted desensitization of an asthmatic patient. This patient was very sensitive to horse protein and the inhalation of the emanations from a horse was sufficient to produce severe asthma. A minute quantity of horse serum rubbed into the skin immediately produced locally a small wheal, and severe respiratory discomfort in the patient. The physician sought to desensitize him by injecting intravenously small doses of horse serum. One minim was selected as the initial desensitizing dose. The introduction of that amount produced immediately a most severe anaphylaxis and inside of an hour the patient was dead. The case was reported fully in order that others might profit by the experience, for which the physician is to be commended. In commenting on this case it was suggested that probably such a result would not have occurred had the serum been introduced subcutaneously rather than intravenously. However that may be, the case shows how small a dose of protein may cause death in a sensitized individual.

Further chemical work is being carried on concerning the character of the toxic split-product to which I have referred. This has been identified by Dr. Abel of Johns Hopkins as histamin. He has found this as a structural part of proteins from various sources, and its introduction into animals produces death with symptoms identical with anaphylactic shock. He finds a similar substance in large amount in the pituitary gland, and suggests that the effect of pituitrin may be due to the presence in it of histamin. If that toxic portion of the protein molecule, which may be histamin, is responsible for the toxic symptoms present in bacterial infection, future research for the advancement of therapeutic medicine is going to be directed at that toxic substance. It is not too much to hope that some means may be found by which that toxic substance in the patient's system may be neutralized or rendered inert. The practical accomplishment of this would far transcend any previous achievement of therapeutic medicine, and we may keep our eyes open for productive research in this direction in the coming years.

SYPHILIS AS A FACTOR IN DEAFNESS*

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Owing to its prevalence, syphilis plays an important part in deafness, more than has been supposed in the past. Syphilographers claim that in the United States there are one in every

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ten persons suffering with syphilis, and otologists in the past claim that 4 percent of those cases having syphilis have some defect with their hearing apparatus. Estimating that there are 110,000,000 people in this country, there are 11,000,000 luetics, and 4 percent of that number gives us 440,000 who have some form of otological condition caused by this disease. This, permit me to say, is not too large an estimate, and I am prone to think is not large enough.

Congenital and hereditary syphilis involving the hearing apparatus occurs more frequently in children than it does in adults. James Kerr Love, a Scotchman, in a work entitled "Diseases of Children in School Children" has the following to say, after making routine examinations of many school children and of syphilitic families: "In a series of 21 families there were 172 pregnancies; 30 miscarriages, or stillborn children, 75 deaths nearly all in the first or second year, 31 deaf or deaf and blind children. In another series of 22 families and 185 pregnancies, there were 40 miscarriages or stillbirths; 25 deaf or deaf and blind children. A study of these family trees points to the following conclusions: (1) Syphilis is an infectious disease, which having entered the blood of the parent is transmitted to the child. (2) Amongst the children it stunts and dwarfs and kills. Many are stillborn, many die within a few months or during the first year, and of those who survive, some become blind, some deaf and some both blind and deaf. (3) The Wassermann nearly always proves positive when the combination of blindness and deafness occurs in the child of syphilitic parents. Occasionally, the result is negative. (4) A common cause of death among these syphilitic children is meningitis, and this disease occurs usually during the first or second year." It may be urged that these are cases of acquired deafness; that the deafness does not appear until about school age. Many of these children have meningitis and this in turn is very often the cause of the disease.

The conclusions of Fraser of the Edinburgh Royal Infirmary reports of 1908 are as follows: (1) Inflammatory processes occur in the meninges of children affected by congenital syphilis. (2) Specific interstitial inflammation of the acoustic nerve accompanies this meningitis. (3) The inflammatory process thus spreads to the inner ear, most frequently giving rise to irritation but sometimes to inflammatory exudation. (4) These changes are the same as those which give rise to late specific deafness. (5) Syphilis causes deafness in children and in very young children causes meningitis which affects the acoustic nerve."

Thus we have two men who have been working separately and at different times, arriving practically at the same conclusion relative to

the frequency and cause of deafness early in childhood. I think it is safe to say that the internal ear is the portion usually involved in childhood deafness.

Acquired syphilis of the ear is found nearly always in early adult or adult life; all portions of the ear may be attacked by acquired syphilis, the external ear less frequently.

Primary infections of this portion of the ear very rarely occur, but the initial lesion may happen as it would in any other portion of the body if there happened to be an abrasion of the skin and subsequent infection. Secondary affections of the auricle are the same as skin eruptions wherever found. Gummata are very seldom met with in this area, although there may be ulcers and condylomata. Occasionally there may be a gumma of the membrana tympani, but it is very rare.

Syphilis of the middle ear occurs by the way of the eustachian tube, causing a necrosis of the mucous membrane and osseous tissues thereabouts. This produces deafness in that there is an interference with the air conduction apparatus. It is not always easy to make a diagnosis of this particular area, owing to the fact that syphilis apes many other affections of the middle ear. The portion of the ear attacked most frequently in acquired syphilis is the internal ear. The diagnosis of this is frequently quite puzzling and may be overlooked.

There is a feeling that the loss of function is due to a toxin attacking the nerve, and the reason for the frequent rapidity of action may be influenced by the anatomical peculiarity of the nerve, it having no neurilemma. McKenzie has shown that there is an early deposit of spirochetes in the nerve itself, and in the capsule of the labyrinth; the contents of the labyrinth are free of spirochetes. The presence of the spirochete implies an increase of lymphocytes and hence the possibility that the neuritis may exist regardless of toxins. Symptoms of this type of deafness may be enumerated as follows: Sudden deafness, nearly always bi-lateral, is not progressive in character, subjective noises are very intense and continue after deafness has become complete. When there is unilateral deafness the Weber test is to the unaffected side. There may be a complaint of pain, but this is usually due to periosteal growth in the labyrinth. The static labyrinth usually compensates after awhile.

Diagnosis: In deafness due to syphilis in any form the diagnosis depends upon several factors: (1) Stage of the disease. (2) History of the case. (3) Various tests to determine how the ear is functioning. If there is a disturbance of hearing along with the eruption of the skin or with an eye disturbance, it is easy to make a diagnosis of syphilis of auditory

apparatus, but of the many tests to determine syphilis of the internal ear, perhaps the various bone conduction tests are as valuable as any. One of the more recent articles in the *American Journal of Syphilis* entitled "The Diagnostic Value of Lowered Bone Conduction in Syphilis" presents the work of W. H. Gouckman, R. A. Barlow and J. H. Stokes. Their study was made "for the purpose of studying reliability of a test based on the difference in perception of sound by bone conduction as compared with an otherwise normal hearing test as an aid in diagnosing syphilis. The method employed was as follows: Hearing tests were done routinely by the otologist in which he was unaware of the diagnosis, and 100 cases were then selected in which data were sufficiently complete to establish or exclude the presence of syphilis. The technique is as follows: Part 1. Weber test. Part 2. The number of seconds the patient hears a 128 tuning fork as compared with number of seconds it is heard by the operator. The same test is repeated with the 2048 tuning fork. Part 3. The Schwabach test with 256 fork. Part 4. Rinne test.

"In 100 cases findings were compared. Positive bone conduction tests corresponded to positive symptoms and signs of syphilis in 46 percent, when syphilis was actually present in 59 percent, giving the test an efficiency of 78 percent. The negative bone conduction test under the same conditions, corresponded to the clinical absence of syphilis in 41 percent. This gives the negative test an efficiency of 51 percent when ruling out syphilis. The margin of error in the test as a routine diagnostic measure is indicated by the fact that 20 percent of the cases in which bone conduction was reduced sufficiently to justify a suspicion of syphilis, no syphilis could be demonstrated, and in 13 percent of cases in which syphilis was present, the bone conduction test was negative and contributed nothing to the diagnosis. In latent lues the two tests corresponded in 80 percent of the cases."

Conclusions reached by these men were as follows: "(1) The so-called lowered bone conduction test as compared with normal hearing is positive in 78 percent of cases of known syphilis. (2) From the otologic standpoint the test is only of value if a complete hearing test is done. (3) The efficiency of the test varied greatly in the different types of syphilis, being best in late cutaneous syphilis (100 percent), latent syphilis 80 percent, syphilis of the nervous system 80 percent. It had no value in osseous syphilis, and the results in early syphilis were inconclusive. A negative Wassermann with a negative bone conduction test is strong evidence

of the absence of syphilis. (4) The test agrees with the positive or negative diagnosis of syphilis in 67 percent and disagrees in 33 percent. (5) The test also was positive in 48.7 percent of cases in whom syphilis could apparently be excluded. (6) It has on the whole, therefore, only a restricted value as a diagnostic aid owing to its high factor of error."

An article entitled "The Static Labyrinth in Syphilis" by J. W. Downing, transactions of the American Otological Society, 1917, has to say: "In a large proportion of cases both divisions of the eighth nerve will be affected. The auditory and static labyrinth should be tested. Patients with acoustic neuritis or syphilis may hear the voice surprisingly well and may not complain of deafness until questioned. The tuning forks, therefore, offer the best means of a correct diagnosis. (1) A shortening of the sound perception by bone conduction out of all proportion to the shortening of the duration of perception by the same fork by air conduction. (2) The retention of good hearing for low forks. (3) The loss of perception or a reduction in duration of perception for sounds of high pitch."

I wish also to report a series of cases which we have been able to examine in our office and of known syphilis in connection with the venereal clinic of the Government at the City Dispensary. We have examined in the past six months 288 cases. In each case a complete functional hearing test was performed, including the following tests: Accoumeter, whisper, spoken voice, low note, high note, Galton whistle, Schwabach test, Weber test, Rinne test. Of these the Schwabach test was given especial attention. This test consists of a comparison of the length of time the patient hears the 256 fork with the length of time the examiner hears it, the examiner's ear being normal. Of the 288 cases examined, 52 patients were syphilitic, that is they either had a positive Wassermann or had clinical symptoms sufficient to make a positive diagnosis of syphilis. Thirty-nine of these cases showed no deafness, while 13 showed deafness of varying degrees. Of the thirteen deaf cases, eleven showed a shortened bone conduction of more than 4 seconds, while two cases showed a positive or increased bone conduction. These two cases in which bone conduction was increased were cases of deafness due to chronic otitis media. Of the 39 cases which showed no deafness, thirty showed a negative Schwabach, or the bone conduction decreased more than 4 seconds; in seven, the bone conduction was decreased less than 4 seconds, and in two cases the bone conduction was increased.

The following gives results in tabulated form:

Syphilitic cases.....	52
Deafness in.....	13
(a) Bone conduction decreased	
4 sec. or less.....	0
(b) Bone conduction decreased	
more than 4 sec.....	11
(c) Bone conduction increased	
(positive Schwabach).....	2
No deafness.....	39
(a) Bone conduction decreased	
4 sec. or less.....	7
(b) Bone conduction decreased	
more than 4 sec.....	30
(c) Bone conduction increased	
(positive Schwabach).....	2

Purposely, I have refrained from mentioning the static labyrinthine tests, but they are of immense value in the establishment of eighth nerve deafness. The presentation of this phase of lues has been made clear by Barany, Jones and Fisher, McKenzie and our own Heitger. This should be done routinely when there is any suspicion of lues, and I am not so sure but that it should be done in all cases presenting any form of deafness.

It seems fair to arrive at the following conclusions relative to this subject:

1. Syphilis is much more frequently a causative factor than is supposed.
2. Congenital or hereditary syphilitic deafness usually occurs early in life.
3. Acquired luetic deafness is usually found in adult life.
4. It attacks both the receptive and perceptive apparatus, but the latter much more frequently.
5. It usually is bilateral in destruction of hearing.
6. Diagnosis depends largely upon
 - (a) Case history.
 - (b) Laboratory findings, especially the Wassermann test, both blood and spinal fluid should be made.
7. Bone conduction tests are of important value.
8. Routine examinations of all cases by using all functional tests.

DISCUSSION

DR. C. G. ADAMS (Kokomo): I understood that Dr. McCaskey used the 256 fork in his Schwabach test. I would like to inquire just why he chose that particular fork.

DR. G. W. SPOHN (Elkhart): Every specialist looks at the subject of syphilis from his standpoint, whether he is an aurist or a neurologist. The statistics by the specialist are not generally reliable, because most specialists have their opinions somewhat warped. Writers have said of those who have had syphilis that about

one out of ten have defective hearing. Bezold and many authoritative writers have given statistics to show that about one out of fifty who have had syphilis have defective hearing. It is evident that both sides of the controversy cannot be reliable.

The division of syphilitic deafness into inherited and acquired simplifies the subject very much. Congenital deafness is a disease of children, and affects the young from 10 to 15 years of age. It is more frequent in the male than the female. A differential diagnosis should not be so difficult if it is remembered that the congenital deafness almost universally follows interstitial keratitis, and most cases have the notched and pegged teeth, commonly called the Hutchinson teeth. Besides, these patients have some of the clinical symptoms, as the angles of the nose and mouth fissured, coarse hair, shriveled skin, dry skin, ozena, glandular enlargement, especially the pharyngeal glands, anemic, poorly nourished, irregular and poor eaters.

Acquired syphilitic deafness, as has been said by the essayist, is found in adults. Both forms of deafness should have general antisyphilitic treatment. This is about all that can be done for the disease, whether it attacks the auditory or any nerve. My experience in syphilitic deafness has not been so discouraging as that of Dr. McCaskey—perhaps my cases were mild in character. Because a case is "hard of hearing" and has had syphilis does not say that his deafness is syphilitic. It may be due to a nasal trouble, to a catarrhal condition of the eustachian tubes, or to some middle ear trouble.

I make it a rule to differentiate between the internal, middle, and external ear troubles by the methods given by the essayist. If the case has had syphilis and the labyrinth is involved, then my prognosis is guarded, other conditions being eliminated. But most cases of deafness are due to an infection of the tubes and middle ear.

It has been demonstrated that it requires from three to four years' treatment to put a patient in good condition, or to secure a negative Wassermann. Add to this two years, or make it six years, of careful treatment, both general and local, and usually the inroad to the auditory nerve can be stopped; but the degeneration or the interstitial conditions cannot be relieved. It is a positive understanding that a nerve once destroyed by a syphilitic or other infection can never be rebuilt, or its function re-established.

As to syphilitic meningitis, my experience in this class of deafness is meager. But all writers upon this subject are not of the same opinion. It seems to me that as a meningitis is due to an infection and generally a mixed infection, the inflammation of the meninges would be caused by some catarrhal condition of the middle

ear extended from the tubes and pharynx, the suppuration of the middle ear being extended to the meninges. This can and does happen in cases having syphilis, and some who do not have the disease. I can see how the patient can have his vitality and resistive power lowered by the syphilitic infection, but would this be the primary cause of the meningitis?

In all cases of deafness, it seems to me the aurist should treat the infection of the nares, tubes and middle ear. All parts should be made as near normal as possible. If there is a constitutional infection, as syphilis or tuberculosis, it should be treated accordingly. I have operated a number of cases where the deafness was not relieved. I may be wrong in my inference, but I have concluded that when I had no results or poor results from my operative work, the cases were infected with syphilis. With anti-syphilitic treatment and good constitutional treatment the cases usually did well.

When syphilitic deafness has involved the labyrinth no one expects to give relief: but there was a time when that case did not have the involvement of the labyrinth, and good treatment continued would have given relief.

Aurists usually have poor success in the treatment of syphilitic deafness because the patients do not continue the treatment. The fault lies in the patient, not in the physician. When I am certain that the etiology of deafness is due to syphilis, the patient or some controlling member of the family is informed of the cause, the prognosis and the time necessary for treatment. In this way patients usually remain with a physician long enough to get results. There is no need of a physician getting discouraged, or giving an unfavorable prognosis. The condition exists, and every patient or some member of the family should know what the disease means and what to do in the future as protection to himself and future generations.

DR. ALBERT E. BULSON, JR. (Fort Wayne): I haven't much faith in lowered bone conduction as a diagnostic feature of syphilitic deafness, as it is found in diseases of the sound perceiving apparatus when syphilis is not present. The diagnosis of syphilitic deafness will depend more on general clinical manifestations and blood and spinal fluid findings. While I am a firm believer in anti-syphilitic treatment of deafness in the syphilitic, yet I have little faith in securing benefit to the hearing in congenital syphilis. I have seen marked deafness follow syphilitic interstitial keratitis after energetic anti-syphilitic treatment, and noted that it did not respond to a continuation of intensive anti-syphilitic treatment. On the other hand, I have seen some almost miraculous results from treatment of deafness in acquired syphilis. However, in

the latter class of cases, the treatment to be most beneficial must begin early. The plea for functional tests is well made. There are too many men who begin inflation and neglect to diagnose their cases.

DR. W. S. TOMLIN (Indianapolis): Dr. McCaskey has quoted considerably from a paper which I read, "The Diagnostic Value of Lowered Bone Conduction in Syphilis". I am very much inclined to question any real value in that sign. Of course we know that in congenital syphilis you have disease of the auditory nerve itself and some destruction of the nerve itself. I remember seeing experiments in one of the large pathological laboratories abroad, with a view of determining the condition of the auditory nerve in congenital deafness, and it was quite uniform that there was destruction of the auditory nerve, usually complete destruction, and so far removed from the labyrinth that both functions were affected alike, the static and the auditory. In the acquired syphilitic condition, the auditory branch being so much more delicate than the static branch, it is involved much more frequently.

As to the outlook for such cases of acquired syphilis in beginning deafness, my experience has been that it is very good indeed. I have seen but few cases of severely damaged hearing where the anti-syphilitic treatment was begun early.

DR. HARRY BOYD-SNĒE (South Bend): I take it that the essayist has clearly established his diagnosis as syphilitic otitis interna. I did not hear him call attention to differential diagnosis, and I would especially like to hear him discuss the differential points which will exclude otosclerosis.

DR. G. H. MUNDT (Chicago): The Doctor brought up the subject of the subjective tests of hearing. The man is negligent, to say the least, who starts to treat a patient who has a deafness when he does not know definitely where that deafness is located, and it is surprising to me how frequently men begin to use inflations of the middle ear and other things when they have never made any subjective test of hearing.

If you are going to get results in syphilis of the internal ear, you must make a diagnosis, and must make it at once and then get busy. The man who waits until next week to make a diagnosis is going to lose just that much hearing. When a patient becomes rather suddenly deaf in one or both—usually in both—ears, if you locate the lesion in the apparatus of perception the thing to do is not to fool around with a blood Wassermann, but take a spinal fluid Wassermann. Patients with syphilitic internal ears, and who have negative bloods, will have positive spinal fluids.

DR. C. H. McCASKEY (closing): The purpose in presenting this subject is two-fold: First, to bring out the point that the men who are treating these cases of syphilis, *i. e.*, the syphilographer and the general practitioner, owe it to their patients to have a functional ear test made. Heretofore those cases have gone on under treatment, or have disappeared from the person who is treating them, and then show up in some otologist's office when it is too late, with a deafness, and expect relief; whereas if their ear condition had been noticed and diagnosed at the proper time, and the importance of the thing laid before them, they would perhaps have been a little more consistent in following out the treatment prescribed. So one point in this paper is the importance of routine functional ear examinations of a great many syphilitics.

The other point is this: I would urge upon every member of this section that in all cases coming into your office complaining of any ear condition, you make a thorough and complete otological examination of that patient as a routine measure. Even in cases where patients do not complain of ear conditions it is well to make a functional hearing test. If you do that you certainly will not overlook a good many of these cases of deafness.

But in reply to what has been said: I am prone to believe that the safety of your hearing apparatus, especially your perception apparatus, lies in an early diagnosis of the condition. As one discussant said, the longer the time from the acquisition of syphilis, the more danger to the hearing apparatus.

I was asked the reason for using the 256 fork. That was just a matter of following out what is commonly known as the Schwabach test.

Reference was made to treatment of congenital deafness. When you have cases of congenital deafness there isn't much chance that treatment will do these cases any particular good; but in acquired cases early treatment is indicated. Delay is dangerous.

I was asked to differentiate between syphilitic labyrinthitis and otosclerosis. I did not go into the subject of differential diagnosis. The exclusion of otosclerosis, however, would be based on your Schwabach test and other functional tests. In otosclerosis we have Bezold's triad symptom-complex, (a) loss of hearing for the lower musical tones, (b) prolonged period of hearing by bone conduction, and (c) a negative Rinne. In otosclerosis the Schwabach test is positive. In syphilis, as we have shown in our paper, the Schwabach test is negative, *i. e.*, bone conduction is reduced. In establishing deafness of the ear we were interested only in proving that the statistics relative to syphilis were about as mentioned.

It does not make any difference in syphilitic deafness whether the nasal cavity or the pharynx or what part of the nasal cavity is involved; if you don't make a diagnosis of syphilis you are not likely to do your patient any good by any other method of procedure, because when you get through he still remains deaf, and he will go from you to some other doctor, and from him to another, until finally someone has made a diagnosis of syphilis and then given him the prognosis that goes with it.

Just a word about statistics. Statistics do vary with the various operators and the various students of any particular phase of medicine. But when you get a compilation of statistics from a great number of people and the sum total is about a certain percent, then you may be reasonably sure that your statistics are of some value. To go off on a tangent and say that some man says 47 percent for deafness, and some other another percentage, is not the correct way. But when you take a great number of men who have studied the matter, have arrived at conclusions, and have summed up their figures, we will get say four or five percent. Bagby in his chapter on syphilitic deafness, and Hazen in his work on syphilis arrive at the conclusion of about five percent. Hazen's work was published in 1919, and was about the latest work that I could find on the subject.

In conclusion, I wish to urge upon you as otologists the routine examination of all cases that come into your office.

CHOLECYSTITIS*

GEO. G. RICHARDSON, M.D.
VAN BUREN, INDIANA

This is a subject upon which there has been much discussion, great differences of opinion among the authorities, and a vast amount of literature has been brought into existence in order to bring before the medical and surgical professions the import of this common abdominal condition and the far-reaching mischief it is capable of producing.

All workers, writers and investigators recognize the great part the gall-bladder and its ducts play in the varied and complicated pathology of the upper abdomen. So constantly pregnant with varied degrees of trouble is this field, and so widespread in its extended pathology into other fields of the abdomen, together with the broad scope in which it may show its authority in the life time of the individual, that such men as Deaver, Crile, C. H. Mayo and many others of our best authorities have come to conclude that the gall-bladder and its ducts are the most

*Read before the Medical Section of the Indiana State Medical Association at the South Bend session, 1920.

important of all the abdominal organs as they relate to the medical and surgical fraternities.

For the above reasons might we not, for a brief period, discuss again this old familiar story of the gall-bladder and, perhaps during the discussion which the author hopes will follow these brief statements and conclusions, there may be brought out a new thought or two, or some of the old opinions made clearer and more interesting, and thus some little good may come to doctor, surgeon and suffering humanity alike. If this small benefit can be accomplished, the review of this old tale of cholecystitis and its train of devastating ravages may prove to be a blessing much appreciated by someone who now reposes in your best judgment his confidence, his trust, his life—at least I can safely say—his future health.

The reason for this last statement is my personal experience with quite a number of these cases in which I am thoroughly convinced, from the standpoint of a medical adviser, that if you drain or cause to be drained a gall-bladder which should have been removed you will have abundant reason to regret this procedure. Especially is this true if you have the very common catalog of adhesions and long train of complaints from the uncured patient which finally forces upon you the humiliation of reoperation for the relief of the original symptoms.

In case of disease of the gall-bladder your patient will have reduced capacity of this organ and he will be conscious, to some extent, of its contractions and expansions, as evidenced by the painful crampings. Pain, associated with gall-bladder disease, has been too frequently attributed to stones, and in many medical minds the two have never been disassociated. However, the fact is conceded by all observers that fully one-fourth of the cases of cholecystitis are not accompanied with stones, but that the pain is the result of obstruction from large masses of mucus and thickened bile, and this latter condition is the sole cause of the well known so-called disorders of the stomach familiarly classed as indigestion for which nearly all cases of cholecystitis have been treated at some time during their early history. This is not to infer, however, that the severe climaxes of pain requiring the administration of morphia are not due to impacted stones.

In 1914 Rosenow demonstrated that the streptococci was the germ most frequently found in cholecystitis, and supplementing this work Brown later teaches that by making cultures of the emulsified tissues of infected gall-bladders and injecting into other animals the emulsion containing the streptococci in predominance, a strong elective affinity is noticed for the gall-bladders of such animals, and also states that the same strain from the tonsil indicates that

cholecystitis may frequently result from a focal infection borne by the blood stream.

My experience in several tabulated cases leads me to conclude that in an adult where pain in the upper abdomen is preceded by vomiting, you are warranted in thinking of gall-bladder disease, while if the pain is the initial symptom and followed with vomiting I am in the habit of thinking first of appendicitis. In the early history of gall-bladder inflammation we are most sure to find a rather typical and constant train of symptoms, namely, indigestion, slight discomfort after eating, not severe pain, but described by the patient as discomfort, fullness as if a heavy weight were in the stomach, which shifts either to the right costal margin or to the back, eructations of gas, nausea, frequently followed by vomiting.

A severe acute attack may be readily recognized by sudden pain, preceded or followed by nausea, vomiting, which when severe, produces marked prostration, and generally, in this state, you can determine some enlargement in the gall-bladder region. When the vomiting persists you can almost be assured that the inflammation has extended into other regions resulting frequently in peritonitis. In the case of the latter, tenderness is very marked and although diffuse at first, soon localizes itself in the vicinity of the gall-bladder.

For a number of years I was depending upon jaundice as one of the important symptoms diagnostic of gall-bladder disease. Experience has taught me, however, that jaundice is not even a symptom in an uncomplicated case of cholecystitis. This symptom only occurs where the inflammatory process has spread into the common duct or into the hepatic or smaller ducts, causing obstruction of an inflammatory nature. The reason for calling especial attention to this point is because I had so depended upon jaundice and because I think it has been so commonly associated with cholecystitis by the large majority of medical men.

Most writers recognize the difficulty of readily diagnosing cholecystitis, and many operators of wide renown admit that this is the true status, even with the abdomen open and the gall-bladder under the direct observation of the eye and the sense of touch.

Every earnest, conscientious, thinking doctor or surgeon of today recognizes the vast importance of a thorough and an early understanding of the conditions which exist within the right upper abdomen of his sick patients, and thanks to the splendid teaching of our efficient surgical fraternity, we medical men are coming closer and closer to the surgical way of early intervention in treating the pathology which experience has abundantly shown can be removed in no other way except by the applied surgical art.

In late years it has been my practice to advise operative treatment in all my cholecystic cases which do not respond to medical treatment within a very reasonable time. I believe this to be the only just procedure to both patient and surgeon. The ill effects of delay in cholecystic disease are numerous, and extending as they do into the liver, the ducts, the pancreas, the bowel and the peritoneum, I conclude that medical measures alone are not to be relied upon in many cases of inflammation of the gall-bladder except perhaps in the simple forms of the catarrhal types. From my personal experience with a goodly number of cases of gall-bladder inflammation I am better satisfied if I can have a good clean surgical procedure instituted immediately on my diagnosis of cholecystitis.

There are few conditions arising in the pathology of the whole abdomen which are capable of more treachery than the gall-bladder inflammations, and I would except only the appendix. Personally I like to have my gall-bladders drained or otherwise taken care of before the inflammation invades the walls of the viscus, if possible.

A good many years ago that great teacher, Moynihan, taught us the cardinal symptoms by which we might arrive at a diagnosis in this condition almost in its incipency. He showed that the very first symptoms are referred and complained of, not in the gall-bladder or its ducts, nor even in the liver, but in the stomach. It was he who taught the import of weight or distress after eating, which we now designate as epigastric fullness, which, for a time, is relieved by soda or by belching and especially a little later by vomiting. There is a peculiar association as regards foods, namely, greasy foods and some raw fruits, as apples, frequently initiate the so-called indigestion. This is frequently accommodated by the patient loosening the clothing or varying the position of the body. This may not relieve, then we can expect the old familiar heart-burn, gas and acid fluid with increased discomfort leading to a more severe pain localizing in the right costal margin. Slight to copious bile vomitus is frequent, which is especially common as the attacks increase in severity and frequency, which alas, they nearly always do. In this stage, the pain which now has become controllable only by morphia, radiates backward and quite commonly engages the right shoulder and occasionally extends down the right arm.

Jaundice, as stated above, does not occur at this time, but if this symptom should occur a few days later and progresses to a marked degree, rest assured that something unpleasant has happened beyond the vale of our old friend the gall-bladder. Often a chill or two with profuse sweats accompanies the foregoing category to

cheer the suffering patient and otherwise enlighten the medical attendant. Complete obstruction may occur at any time when in this stage and such condition may be either from impacted stones or from large balls of thick mucus and infected bile, or from swelling of the mucosa alone. In my humble sight this class of cases is especially needful and favorable for operation.

In the practice of medicine I am thankful for one thing especially, and that is I am learning more and more where medicine should cease and where surgery should institute, and please let me insist at this point that I am not advertising for any special wielder of the knife, nor am I a profound advocate of surgery for every belly pain, but I am glad to be reaching the point where the surgeon is my bosom friend and counselor, much to the happiness and well being of both myself and my patients.

There is no condition within the realms of medicine and surgery where a close relationship and correlation of knowledge and judgment between doctor and surgeon should exist more profoundly to the ultimate benefit of all concerned than in this oft repeated story of cholecystitis. I have recently had abundant experience medically and in cooperation with the surgeon to warrant the above statement.

My constant endeavor, where cholecystitis is probable, is to arrive at as early diagnosis as possible for delay in this regard is dangerous to say the least, for sooner or later a stone or stones will find lodgment in the common duct and result in either acute or chronic obstruction of this channel.

All agree that common duct obstruction in conjunction with acute cholecystitis is much more treacherous than simple cholecystitis. This adds greatly to the difficulty of operation, also detracts in like measure from the patient's welfare. In this condition too one must not overlook the possible, yea very probable, danger thus engendered to the head of the pancreas, which latter is capable of fat necrosis, or finally to diabetes of the pancreatic type. For this reason, if for no other, I wish to emphasize the importance not only of early and correct diagnosis, but equally early proper treatment which can, in the vast majority of instances, be administered only by surgery.

The danger to the patient in cholecystitis through operation rises directly in keeping with the complications. Deaver states that in acute cholecystitis the "operative mortality ranges from 2 percent to 4 percent; when complicated with common duct obstruction, it rises to 5 percent; and with pancreatic involvement, it reaches 9 percent".

After the vast amount of time and work spent on study and investigation, together with the

thousands of operations on the gall-bladder and its appendages, it would appear that the last word had been said as regards the pathology of this region, and that the method of treatment, either medical or surgical, would now be settled forever.

To say the most, medical treatment of this condition has been only fairly successful, and we all have experienced with chagrin the very unpleasant knowledge of the complications resultant from delay and prolonged medical treatment.

Cholecystitis is perhaps the most common cause of the so-called indigestion, and is most certainly the most frequent of the infections with which we have to deal in the upper abdomen. It is most frequently diagnosed in middle life, but this is not to infer that it does not occur earlier.

I have recently had a case operated at 18 years of age, and the idea of Deaver in which he stated some years ago of "Fat, Fair and Forty, Gallstones," has been abundantly found to have set the mark as to age plenty high, yet it bears out the well grounded belief and teaching of many that cholecystitis and gall stones are possessions belonging to middle life.

I believe that it is now quite conceded that a gall-bladder once infected usually remains so in spite of all medical treatment, and its only recovery is through cholecystectomy or by becoming eventually an atrophied, inactive organ. In either one of these instances the function of the gall-bladder is lost, and it is interesting to bear this in mind when asked by a patient how he can get on if he have his gall-bladder removed, pointing out to him that many individuals are walking the earth with perfectly functionless gall-bladders. There are instances where this is reassuring to a hesitating patient.

In discussing the treatment of cholecystitis it might not be amiss to consider briefly the function of the gall-bladder, inasmuch as I have already indicated that to my mind the treatment must nearly always conclude if not institute with surgery.

Physiologists are disagreed on the subject and as yet its function is not satisfactorily determined. It is quite frequently defined as a bile reservoir, which theory is questioned by some on account of its small size. This would seem at least doubtful when we consider the normal output in 24 hours of some 50 ounces of bile. Deaver and C. H. Mayo believe that the gall-bladder is a tension bulb, which by its elastic contractions accommodates the fluctuations of pressure in the ducts and thus spares the liver injury from backward pressure. The physiologists contend, however, that the bile is collected in the gall-bladder where it is mixed with mucus

which Flexner has indicated makes the bile very much less irritating to the pancreas.

It has been abundantly proven that man can and does exist rather comfortably without a gall-bladder. This fact lends encouragement to the method of treatment. From my study of my own cases in conjunction with the surgeon and watching the results of treatment of numerous cases, I feel that a cholecystic gall-bladder should either be ectomized or drained according to the condition of the patient, the length of time the infection has been in progress and the complicating pathology.

In cases where the infection is of long standing, gall-bladder much thickened in its walls; pus in the gall-bladder; occlusion of ducts by scar tissue or adhesions; or occlusion of cystic duct by a stone or stones; or where the gall-bladder is very large, filled with thick mucus, and the patient otherwise in fair condition, I would strongly advise excision of the gall-bladder.

But on the other hand, in the presence of other precarious disease; extreme obesity, of which I have just had a case; gangrenous gall-bladder, very difficult of excision; active stone formation; very acute infection; and in cases of extreme age, senility; much involvement of the head of the pancreas; and, finally, in the simplest forms of non-infected gall-stone colic, I think drainage only is at present the wisest procedure for the welfare of the patient.

CONCLUSIONS

Cholecystitis is undoubtedly of infectious origin, the infection being bountifully demonstrated in the tissues of the wall of the gall-bladder.

The most frequently demonstrated bacteria is the streptococci.

Cholecystitis is the most common, and, together with its complications, is the most productive of trouble of all the infections of the upper abdomen.

The etiological premise may be focal and located in the mouth or tonsil.

The function of the gall-bladder is as yet questioned, but it is a well established fact that man can live quite comfortably without a gall-bladder, and it has been frequently noted that through long continued disease and resultant atrophy he has survived with a perfectly non-functionating gall-bladder.

Medical treatment alone is insufficient and ineffective except in the simple catarrhal types.

Early diagnosis and early surgical procedure offer the greatest hope of relief and cure.

Cholecystectomy and cholecystostomy are the operations of choice and each takes its place according to the condition of the patient and the pathology encountered.

DISCUSSION

DR. B. P. WEAVER (Fort Wayne): No apology is necessary by the essayist for bringing before this society a subject so poignant and in a way so interesting. There is probably no topography of the human anatomy so pregnant with diagnostic problems and clinical possibilities as the right upper abdominal quadrant, it being the site of at least five anatomical organs, or parts thereof, and most of them rather closely related from a physiologic point of view.

From an etiologic standpoint, the fascinating work of Rosenow has been referred to by the writer. His results concerning the predilection for certain types of the streptococcus to attack the gall-bladder were later substantiated by Brown—and this very happily, since Rosenow's conclusions and inoculation results were so startling as not to meet with the universal acceptance that they would seem to have merited. There remains then only the necessity of recalling the frequency with which the typhoid bacillus attacks the gall-bladder, and the obstinacy with which it retains its residence within that organ, as instanced by the now famous "typhoid Mary".

The very multiplicity of clinical possibilities is very probably largely responsible for the difficulty oft times encountered in making an absolutely accurate differential diagnosis of disease of the gall-bladder. And the great frequency with which dual lesions are simultaneously encountered in the gall-bladder and appendix, or duodenum and gall-bladder, or the not uncommon association of gastric ulcer with chronic infection of the appendix and gall-bladder, makes one feel this diagnostic responsibility the more keenly when he refuses to incriminate this organ in an existing pathology of the right upper quadrant. And this the more so when he realizes the extreme difficulty of passing the correct verdict oftentimes with the belly open and the opportunity for careful inspection and palpation. No careful abdominal surgeon today is willing to go on record as to the pathology of a gall-bladder by inspection, even with the gall-bladder opened, much less by palpation of the unopened viscus. Nor will he conclude necessarily that a gall-bladder which does not empty by pressure in what seems the normal time, is diseased, and that one which does so empty is not diseased.

Waiting for jaundice to appear as a symptom of cholecystitis is about like waiting for tubercle bacilli to appear in the sputum before making the diagnosis of pulmonary tuberculosis. Both mean that the disease is "out of bounds"—to use a football expression—and has gone beyond its legitimate restrictions.

If the pain-vomiting sequence observed by the essayist is sufficiently constant to warrant its

acceptance as a differentiating factor, I am not aware of it but shall gladly pay attention to this point in future observations.

Whether actual stones are present in an infected gall-bladder is a matter of relatively small importance, so that failure to demonstrate a gall-stone shadow by the x-ray should have little weight toward excluding a suspected pathology in this organ. The value of positive findings in cholelithiasis is self-evident. The indirect roentgenologic findings by means of carefully made series of gastro-intestinal plates and fluoroscopic examinations are of distinct value by virtue of demonstrating evidence of pericholecystitis, etc.

An interesting problem for differential diagnosis is sometimes offered by those patients past middle life who by virtue of an abdominal angina, probably dependent upon sclerotic changes in the celiac axis, present an acute syndrome so like gall-bladder colic that it is only after the subsidence of the pain and with absolutely no residual tenderness, the picture clears. It was once my privilege to autopsy and dissect out such a celiac axis from an old lady who was operated upon for what was thought to be an acute surgical belly demanding operative interference; in this case the celiac axis presented a typical pipestem sclerosis throughout.

Early diagnosis spells more favorable prognosis through the avoidance of such complications as common duct obstruction, pancreatitis, cardio-renal and malignant changes. Not rarely does a chronic gall-bladder patient develop such a degree of kidney inadequacy as to render him a poor surgical risk.

The controversy as to treatment has now shifted from the internist to the surgeon. No competent internist will dally long with a demonstrable pathologic gall-bladder, nor will any good surgeon obligate himself to a definitely planned procedure until after he is in the belly and then very often the indication is not always clear as for removal or for drainage. There can't be much question on the whole but that cholecystectomy is rapidly supplanting cholecystostomy, even though it may often be necessary to drain the common duct at the same time. Recurrences take place after either operation, though probably less commonly after removal. That recurrence does obtain, however, in the ducts after cholecystectomy is well illustrated in Judd's case wherein he thrice removed stones from the common duct after a primary cholecystectomy. Occasionally the recurrence is in the hepatic duct or in the liver even, and in this connection one realizes that we are in greater need for more light on the physiology of Oddi's sphincter, and the effect produced upon it and the rest of the biliary tract by removal of the gall-bladder, a study only begun by Archibold, Mann, Judd and others.

PENETRATING EYE INJURIES*

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It is not difficult to select those methods of procedure which stand out as tried and proven. A few years ago I made such a selection and have consistently followed it in the treatment of these cases. I have added to it and subtracted from it at various times by the substitution of new and better methods, but have not made any radical change in the general program. It goes without saying that in certain cases some of the steps are omitted because they are unnecessary. It is, of course, necessary to fit the technic to the case, and not the case to the technic. Rigid adherence to any group of medical or surgical procedures would be impracticable.

GETTING A COMPLETE HISTORY OF THE ACCIDENT.—If you see the patient soon after the accident, while the associated details are clear in his mind, you are able many times, by combining his statements with the examination of the eye, to discover points that will benefit you in determining the treatment of the case. He will be able to tell you what he was doing and what kind of tools he was using when injured. He also may know just what kind of an object struck him in the eye—its size, shape, etc. For instance, if he was hit with a nail or some object of like size, or if he cut his eye with a sharp instrument or tool, we can at once safely conclude that there is no foreign body in the globe. This history, if carefully taken from an intelligent patient, should have the bearing in the case that its importance merits. Many times it will simplify the operative treatment and be explanatory of later developments.

EXTERNAL EXAMINATION OF THE EYE.—The external examination of the eye should be made most carefully, and definite knowledge obtained as to the kind of wound, its extent, position and the relations of the wounded structures, one to the other. The diagnosis between contusion and perforation is sometimes difficult, and this should be determined at this time. The type of the wound and the condition of the globe should determine the prognosis and the treatment. For example, if the cornea is shattered, if the eyeball is totally destroyed from rupture, or the vision is totally lost from hemorrhage, it would be folly to attempt to save the eye either for visual or cosmetic purposes. The gradations of injury from the slightly wounded to the completely destroyed eye-ball are nearly as numerous as the number of eyes injured. So whether the injured eye has normal vision or

only light perception it certainly takes delicate weighing of all the information you are able to obtain in each individual case in order to do full justice to the patient.

It also is wise to make an external examination and take the vision of the uninjured eye. Many factories have the vision of each eye of their workmen taken by a competent man at the time of their application for employment. This information is invaluable, not only from a medico-legal standpoint but as a basis for determining the amount of damage to the vision and the prognosis of the case. McBean¹ reports a case of a man with a foreign body in one of his eyes whose other eye was amblyopia exanopsia from strabismus. A case of this character would naturally be treated differently than if the vision in the uninjured eye was normal. He also reports another case of pneumococcus ulcer from a cinder imbedded in the cornea which was removed by a rusty nail. Patient had trachoma in the uninjured eye which later involved injured eye after ulcer had healed. This resulted in pannus developing on top of the leucoma.

OPHTHALMOSCOPIC EXAMINATION.—When the media are clear, or if the eye is seen before they become cloudy, valuable information may be obtained by an ophthalmoscopic examination. The position and condition of the intra-ocular structures may be observed and sometimes you are able to see the foreign body somewhere in the interior of the eye. A great many cases of this type have been reported. Lambert² reports "a case seen five months after injury in which external appearances were normal. Ophthalmoscopic examination showed a piece of steel projecting from the sclera. There were some vitreous opacities, some changes in the choroid, and the optic disc was slightly congested."

Double perforations are not uncommon, and in case a foreign body has made a counterpuncture in the posterior segment it may be possible to see the point of exit. In a case of this kind if the eye is quiet and the x-ray shows only one foreign body you can safely decide not to remove the eye.

The importance of making an ophthalmoscopic examination early and as complete as possible is of course apparent to every ophthalmologist, and everyone will agree, I believe, as to the wisdom of making it a routine measure if feasible.

X-RAY EXAMINATION OF THE EYE.—The next logical step to take is to make a complete x-ray examination of the eye if there be the slightest suspicion that the eye contains a foreign body.

*Read before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association, September, 1920.

(1) McBean, Dr. Geo. M. Personal Communication.
(2) Lambert, W. E. Foreign Body in Globe. Arch. of Ophth. V. 48, p. 284.

I believe that all ophthalmologists will admit that this examination should be made, and realize the importance of making it early. This should be done by a radiographer experienced in this kind of work, and whose opinion, consequently, we can depend upon. Valude³ insists that "the detection of very small intra-ocular bodies by the x-ray requires special training, and that even a good radiographer for general surgery may overlook a foreign body in the eye." We should determine whether there is a foreign body in the eye or in the orbit. This can be done as practiced by Valude³ who states that "two radiographs should be taken, one frontal with the face toward the plate, the other lateral with the suspected side towards the plate. If careful examination of these show nothing, it may be concluded that no bodies visible by the x-ray are present." In the event that the foreign body is discovered it should be localized by the Sweet method. Some of the ophthalmologists and radiographers have attempted to improve the Sweet method, or introduce methods of their own which they consider superior to it. I do not believe this is possible, as the Sweet method is now so practical and reliable that every radiographer of first class ability and training should be able by its use to furnish us with exact information. Pirrie⁴ "with geometric drawings illustrates how Sweet's method can be at fault," but T. B. Schneidmann⁵, commenting on this statement, declares that "Pirrie seems unacquainted with Sweet's later work which guards against possible error."

We should also discover, if possible, whether the foreign body is intra or extra-ocular, which is of great importance. In the event that the Sweet method does not give us this information, a method outlined by O'Brien⁶ can be used. It is as follows: "Suppose the exposure for the picture is ten seconds. For the first five seconds have the patient look straight out, then have him change the direction of the visual axis by rolling the eye up as much as possible and complete the exposure. Make another exposure, but do not move the eye. If the foreign body is in the globe, the x-ray will show either two bodies or an extension in the direction of the movement of the opacity as compared with the latter picture. When the foreign body is in the orbit or adjacent tissues its position is not affected by any movement the eye will make. There is, however, a slight possibility of error

when the foreign body is in an external ocular muscle or tendon. Then it will show some displacement, but a careful reading of the picture will discover the true meaning."

THE REMOVAL OF THE FOREIGN BODY.—Clapp⁷ states that "the chief point in discussion at the present time seems to be the relative desirability of using the anterior method of extraction as advocated by Haab, or the posterior route as championed by Sweet, DeSchweinitz and others. Our experiences up to a few years ago made us rather favor the anterior method. More recently it has changed somewhat and, relatively speaking, I would prefer the posterior route. Of course there can be no hard and fast rule, but all cases are to be handled individually, and in case of recent injury, with the foreign body in close proximity to, or even in the wound of entrance, immediate extraction through the wound is preferable. We are aware that Col. Lister established very definite rules for extraction by the anterior route, but certainly our cases of posterior extraction were more satisfactory than those removed by the anterior route, and in none of our cases did we experience the troublesome detachments reported by some. On the other hand this class of cases cannot be handled dogmatically, but each case should be carefully studied, with the exercise of one's best surgical judgment."

Lamb⁸ reviews the literature on the extraction of foreign bodies from the vitreous by the anterior chamber with the scleral route. He concludes that "there is as much authority for one method as for the other." He thinks that "in recent injuries, where healing has not yet occurred, the steel should be removed through original opening. When the wound has healed and the steel is in the lens or anterior to the lens, it should be removed through the cornea, but where the wound has healed and the steel is in the vitreous chamber, it should be removed through the sclera."

Koster⁹ in discussing the management of cases with small foreign bodies in the periphery of the anterior chamber states that "if the foreign bodies are magnetic and the trauma recent they should be removed through the original wound with the giant magnet. If the foreign body is small and the wound has closed, a new opening is made at the periphery of the anterior chamber, where the piece drops when the magnet stops attracting it."

Shackleton's¹⁰ experience in thirty-five cases convinced him that "the anterior route will as

(3) Valude, E. Radioscopy and Radiography of Ocular Foreign Bodies. *Annales d'Oculistique*, June, 1918, V. 155, p. 261.

(4) Pirrie, A. H. Localization of Foreign Bodies in the Eye. *Arch. of Radiol. and Electro-therap.*, November, 1918, p. 169.

(5) Schneidemann, T. B. Injuries. *A. J. of O.*, December, 1919.

(6) O'Brien, John J. Foreign Bodies in the Eye-ball. Three Illustrative Cases. *A. J. of O.*, May, 1919.

(7) Clapp, C. A. Removal of Steel from the Eye from an Industrial Standpoint. *A. J. of O.*, May, 1920.

(8) Lamb, H. D. Extraction of Foreign Bodies from Vitreous. *Interstate Med. Journ.*, V. 25, p. 577.

(9) Koster, W. Removal of Small Foreign Bodies from Anterior Chamber. *Tijdschr. V. Genneesk.*, 1917, V. 1, p. 802. *Abst. A. J. of O.*, V. 2, p. 217.

(10) Shackleton, A. J. of O. V. 1, p. 206.

a rule yield the best result". In no case in which the original scleral wound is not open, would he choose the scleral route unless the foreign body could not be brought into the anterior chamber after prolonged effort.

Shoemaker¹¹ states that "if the anterior segment of the eye-ball is intact and uninjured, I certainly would not injure it by dragging a foreign body from the vitreous into it, and further injure it by taking a foreign body from it. We all know the foreign body is supposed to come into the anterior chamber, but we also know that it sometimes is clumsy and spoils a perfectly good lens or iris in its transit."

I am quoting these various writers in order to demonstrate that there is not as great a divergence of opinion as one would think. The majority believe that the foreign body should be removed as expediently as possible, with a minimum of trauma and the saving of all possible vision. Most of them remove the foreign body through the wound as close to the location of the foreign body as possible, whether it be the wound made by the foreign body or an incision made by the operator. There is, however, a small minority who insist that the foreign body in the anterior chamber should be pulled back through the lens, the vitreous, and an incision in the sclera; and that the foreign body in the posterior segment of the ball should be pulled through the wound of entrance if it happens to be somewhere in the anterior segment.

I am impressed that a little judgment used in the selection of a route for removal of the foreign body would not be amiss. The result desired is a sightly eye with as much vision as possible, and this cannot be obtained by arbitrarily forcing each wounded eye containing a foreign body to fit an inelastic, unbendable technique. The foreign body should be removed just as quickly and easily as possible, regardless of the wound of entrance. What is gained if you do get the foreign body and ruin the ball or lose the vision?

The intra-ocular foreign body demands removal as soon after injury as possible, but if its removal is fraught with difficulty and it is decided that it will be associated with so much traumatism that the vision will be lost, either the eye should at once be enucleated or the case kept under observation if the eye is quiet. This manner of procedure is particularly applicable to cases of non-magnetizable intra-ocular foreign bodies, frequently seen, which are sometimes impossible to extract by any method without ruining vision and the globe. Terrien¹²

calls attention to the well-known fact that "occasionally the foreign body may not only be tolerated, but its presence be compatible with many difficulties; even large bodies have been removed several months after penetration; and that one would not entertain the idea of exposing to all the dangers of extraction an eye possessing good visual acuity."

THE SELECTION OF A MAGNET.—The large and small magnets both have their respective fields of usefulness, and one should not arbitrarily use either one or the other for all cases. I believe with Lamb⁸ that "both the large and small magnets are necessary to an oculist's outfit, for, whatever method is favored, each will at times be of value." Frenkel¹³ states that "in the case of large foreign bodies the small magnet is more conservative of the tissues, while the small foreign bodies are more easily removed by the large magnet. In other words, it is a mistake to feel that either the large or the small magnet is always the best in every case." Sweet¹⁴ found, in testing the relative strength of the Haab, the Hirschberg and his own magnet, that "at 2 mm. distance, his own was superior; at 5 mm. the Haab was stronger, but not markedly so; while at 10 mm. or more, the large magnets were decidedly superior."

THE REPAIR OF THE WOUND.—It appears that almost every ophthalmologist is in favor of covering the wounds with conjunctiva. Methods vary with different men; some use small and others large amounts. "The importance of suturing the eye-ball and covering wounds with conjunctiva as soon as possible after injury" has been urged by Krusius¹⁴:—"In wounds of the globe Kuhnt's conjunctival covering is to be recommended, closure of all gaping wounds by sutures and covering with a conjunctival flap."

Putnam¹⁵ uses conjunctival flaps for large injuries of the cornea. He classifies the operations as follows: "(1) The single pedunculated flap. (2) The double pedunculated flap. (3) Two flaps, one with a single peduncle, the other with two bases. (4) The complete flap."

Shuster¹⁶ advises using conjunctival flaps in perforating wounds of the cornea and sclera, and calls attention to "the necessity of thorough asepsis and prophylaxis to prevent infection".

I am in favor of the liberal use of conjunctival tissue in closing the wound. First, the method used should be one which will produce a minimum of trauma; second, which will not intro-

(13) Frenkel, H. Prognosis and Treatment of Penetrating Ocular Wounds. *Arch. d' Ophthal.* V. 36, p. 193.

(14) Krusius, A. J. of O. V. 1, p. 202.

(15) Putnam, F. I. Use of Conjunctival Flap in Eye Injuries. *Journ. Lancet.* V. 39, p. 41.

(16) Schuster, S. A. Use of Conjunctiva in Perforating Ocular Injuries. *Southwestern Med.* V. 2, pp. 1-3. No. 14.

(11) Shoemaker, Wm. T. Penetrating and Perforating Wounds of the Eye-ball with Diagnosis and Treatment of Retained Foreign Bodies. *A. J. of O.* August, 1919.

(12) Terrien. *A. J. of O.* V. 1, p. 207.

duce or leave a passage for the introduction of infection, and third, which will leave the framework as strong as before the injury.

Allport¹⁷ never stitches the sclera in any of his cases but a great many operators do where the conditions warrant it. If the conjunctival flaps bring the cut edges together with almost a certainty of union it is unnecessary, but if the wound is extensive and there is a prolapse or a threatened prolapse of a goodly proportion of the vitreous it should be done. Certainly no infection can result where the proper aseptic care has been taken.

Two conjunctival flaps should always be used, so that there results a double conjunctival covering over the wound and the stitches used should be placed as far away from the wound as possible.

SUBCONJUNCTIVAL INJECTIONS.—One of the most useful measures in gaining a good result, and one which I believe should always be used in these cases, is the subconjunctival injection of either mercury oxycyanide or mercury cyanide. Personally, I prefer the oxycyanide, but the majority of those who use this treatment think that the cyanide is the better of the two.

Black¹⁸ commenting on the use of mercury cyanide in a severely infected and penetrating injury states that "it was injected subconjunctivally, causing a very violent reaction, but the progress of the infection was at once arrested".

Bulson¹⁹ states that "subconjunctival injections of cyanide of mercury are deserving of most extensive use".

A very weak solution of one or the other should be freely injected all around the eye following the repair of a penetrating wound, so that the eye is completely bathed in the solution. It has been my experience that this treatment prevents secondary infection, and eliminates the infection already present. By the use of this remedy I have been able to save eye-balls with large wounds in the most vital regions which have been, undoubtedly, contaminated with many septic agents. I have taken sutures through the cornea, through the sclera when there was a large prolapse of vitreous and iris, and where the eye was badly traumatized both by the injury and the necessary operative work, with prompt healing and fair vision resulting. This has been unquestionably due to the fact that the eye was rendered aseptic by the complete exhibition of this method.

THE USE OF WHITE'S OINTMENT.—I have a great deal of faith in bichlorid salve used in the cul-de-sac, and iced compresses following the operation. I have used these agents in

almost every case for the past several years and believe that they are of great help in obtaining a good result.

JUDGMENT ON THE DANGER OF SYMPATHETIC OPHTHALMIA.—Sympathetic ophthalmia is the ghost that haunts the ophthalmologist, but there is no need of fearing this disease if proper judgment is used. If it be remembered that sympathetic inflammation does not occur in less than three weeks from date of injury, a delay of ten days or two weeks is comparatively safe.

Sordille²⁰ did not see a single case in more than 3,000 military wounded, and but five in civil patients. Three of these resulted in blindness. Dimmer²¹ also states that "this disease occurred very rarely in the last war". He concludes that "the marked reduction in the number of sympathetic ophthalmias in war injuries is due to timely enucleation, a fact that would deserve the widest publication".

I believe I am warranted in declaring that if a prompt and rational decision is made, this dreaded disease need not be feared. Taking into consideration the type of wound, the condition of the globe, the vision of the wounded eye, the vision of the other eye, and the other details of information gained by a complete and exhaustive examination, together with a period of observation not longer than two weeks, should make it possible to definitely determine whether the globe should or should not be enucleated. Good, clear-headed judgment in summing up and interpreting this information will enable the ophthalmologist to steer clear of mistakes.

SUMMARY.—I believe the following methods of procedure which I have selected from the rich fund of ophthalmological experience quoted are rational and practical measures which should be followed consistently in all penetrating eye injuries:

(1) A complete history of the accident should be obtained from the patient as soon as possible.

(2) A careful external examination of the eye and wound should be made as a guide to further operative procedure and, particularly, in order to establish a diagnosis between contusion and perforation.

(3) Next an ophthalmoscopic examination is in order, if the media are clear. Valuable knowledge can be obtained by using this procedure as a routine measure.

(4) A complete x-ray examination of the eye should be made, preferably by the Sweet method, if there be the slightest suspicion that the eye contains a foreign body. This should

(17) Allport, F. Removal of Steel from Eye. New York Med. Rec., v. 106, p. 1205.

(18) Black, A. J. of O., v. 1, p. 199.

(19) Bulson. A. J. of O., v. 2, p. 201.

(20) Sordille. A. J. of O., v. 2, p. 105.

(21) Dimmer. War Injuries and Sympathetic Ophthalmia. Klin. Monatsb. f. Augen Heilk., v. 57, p. 257.

be done by a radiographer whose training and experience with the Sweet method qualifies him to make a definite diagnosis.

(5) If an intra-ocular foreign body is discovered, and its removal is not fraught with difficulty, it should be removed at once. The route selected should be the shortest distance between the foreign body and the outside of the globe, regardless of the location of the wound entrance, and a method used which will result in a minimum of trauma and a saving of all possible vision.

(6) In the event the foreign body is magnetizable the type of the magnet should be chosen only after a careful consideration of all details, with full regard to expediency of extraction.

(7) The wound should be repaired by stitching the sclera (and the cornea, if absolutely necessary) if there is a prolapse or a threatened prolapse of any of the intra-ocular structures; and conjunctival flaps should always be used covering the full extent of the wound.

(8) A subconjunctival injection of a weak solution of either mercury cyanide or oxycyanide should be used following the repair of the penetrating injury.

(9) The use of White's Ointment and iced compresses following the operation should be routine measures.

(10) The decision as to whether the eye is allowed to remain, or is enucleated in order to avoid sympathetic ophthalmia, should be made not later than two weeks following the injury, after full consideration is given to the information you obtain from a complete examination. In case of doubt it is wise to remove the injured eye. It is far better to have one eye-ball with good vision than two eye-balls and no vision.

DISCUSSION

DR. W. A. HOLLIS (Hartford City): It is very important to get a complete history of these eye injuries early, as Dr. Adams has advised, for other reasons than aiding you in the diagnosis. The history should be a matter of record as a protection for yourself, an aid to the industrial companies, and an aid to the patient. Your duty to the industrial company is no more important than your duty to the individual himself, and the first three points of the essayist's conclusions would certainly embody a complete history: The ophthalmoscopic examination, the external examination, and the eliciting of the method of injury.

I can neither condemn nor endorse the subconjunctival injections of mercury cyanide or oxycyanide for the reason that I do not use them because they are so violently irritating and so painful. Of course I am aware that a terrific reaction of this kind is a thing to be desired, yet the discomfort of the patient does not seem to me to justify the use of mercury

cyanide when there are other agents that will accomplish the same purpose. The use of White's ointment and ice is a practical point, and a very important one.

I agree with Dr. Adams in the use of the mercurial ointment. I use it preliminary to all operations upon the eye in which the anterior chamber is to be opened. Always after the operation I use it as a dressing, and in the repair of all conjunctival wounds. That, in conjunction with the use of ice for the first 24 hours, is certainly very gratifying.

Localization of foreign bodies is of the utmost importance, but must be carried out very early. Localization is sometimes secondary to the actual removal of the foreign bodies, because of the adhesions that are liable to form around the foreign body. The foreign body may lie in the eye for years without giving any trouble, if it is not too near the danger zone. Collins reports a case in which a foreign body remained within the posterior chamber near the uvea for fifteen years without giving any disturbance whatsoever. Sometimes the meddlesome interference in its attempted removal is a great deal worse than actually leaving it.

Sympathetic ophthalmia is the nightmare of all of us. Fortunately we do not see very many cases. I certainly will agree with Dr. Adams that early enucleation is indicated if the injured eye is not mending properly.

DR. ALBERT E. BULSON, JR. (Fort Wayne): The paper presents the subject in a classical manner and the recommendations are those followed by most all competent and experienced eye surgeons. I wish to emphasize the importance of considering penetrating injuries in the ciliary region or "danger zone" as of far more import than any other type of injury as to the possible production of sympathetic inflammation. I also wish to condemn the practice of promptly enucleating punctured eye-balls except when there has been extensive loss or hernia of intra-ocular contents. The eye-ball, even though blind, is better than an artificial eye, and the vast majority of punctured eye-balls may be saved. The experience in our late war demonstrated that sympathetic inflammation is much rarer than generally thought, and the rule was to save eye-balls rather than enucleate, though such judgment as advocated in the paper was employed. Sympathetic inflammation does not occur short of three weeks after the injury and seldom that soon, so that during the interval the fate of the eye-ball may be determined. Proper treatment will not omit subconjunctival injections and the intelligent use of the subconjunctival flap.

As to extraction of foreign bodies I am in favor of using the wound of entrance when the foreign body can be drawn out that way with

a minimum amount of trauma to intra-ocular contents. In all other cases I prefer making a wound near the foreign body. However, every case is a law unto itself and the procedure and technique will vary accordingly.

DR. G. H. MUNDT (Chicago): I enjoyed the paper very much because it expresses to a very large extent my own sentiments regarding the handling of a foreign body in the globe. There are some men, particularly in our city, who in private conversation have told me that it was of no value to localize a foreign body in the globe. I think that is folly. I think that if it is at all feasible, the localization of the foreign body in the globe should be done.

Relative to the route. Certainly I think it is folly to draw a foreign body through the lens and take it out through the anterior chamber if that foreign body has penetrated the globe through the sclera. I cannot understand why anybody should do it. Yet I know very well that there are men of wide experience who do it.

I think the pendulum of conservatism on enucleation is probably swinging back, and there are going to be more enucleations made, and more promptly, than in the last ten years. I think one reason for that is because there is a general feeling that men who have eye injuries and who are not going to have useful globes, should have their period of disability reduced to a minimum, and certainly an enucleation reduces that period of disability to a minimum.

I like subconjunctival injections very much. Sometimes I use a solution of cyanide of mercury, and sometimes I use a three or four percent solution of sodium chloride which is not as painful. I rather think I get just as good results with it.

I have taken up practically all of the antiseptics that have been brought out in the last several years, and have been enthusiastic about some of them, but I have never had anything that has been as satisfactory over as long a time as mercurochrome 220. I learned from Dr. Bulson last night that a five percent solution is all right. I have been using the two and a half percent solution. It really has great value.

DR. M. H. KREBS (Huntington): There is one thing that I would like to impress upon the members of the section, and that is the routine examination by the x-ray. I think that is a procedure that one should take as a means of self protection, yet at the same time absolute reliance cannot be placed upon it insofar as the exact localization of the foreign body is concerned. I have one instance in mind. A foreign body, supposedly a stone, had been chipped off a larger stone, and entered the eye-ball. The wound was large and gaping. There was considerable hemorrhage into the globe. There

was no question in my mind but that the foreign body was in the globe, yet the parents objected to enucleation. An x-ray picture was taken, and showed distinctly that there was a foreign body somewhere within the orbit. The Sweet method was not used for localization, but I felt positive from nature, position and the extent of the wound, from the picture, and also from the explanation of the roentgenologist, that that foreign body was within the globe. I enucleated the eye. Now, I have not succeeded in keeping relatives out of the operating room, under such conditions, and the relatives in this case were in the room, and wanted to see what was in the eye. I assured them that the piece of stone was in the eye-ball, yet when the eye was removed and opened by my assistant there was an opening in the sclera but the foreign body was not found within the eye-ball. I felt within the orbit, and there was the foreign body, the stone, which looked very similar to the picture that we had seen, but it was entirely outside the globe, and of course had entered the orbit through the globe. Up to this time I have not been able to convince the parents of this child that my procedure of enucleation was not wrong. If it had not been that they could not obtain an attorney to start suit against me I believe that I would have had a malpractice suit on my hands. To this day they still believe that something other than enucleation should have been done.

As a routine matter for your self protection, it seems to me that there is nothing better than the x-ray picture. Yet at the same time it must be remembered that exact localization—and I am sorry to say that the Sweet method was not used in the above case—does not always afford you the absolute information that you require. In this case nothing else could have been done, as the contents of the eye-ball had been destroyed.

DR. C. N. HOWARD (Warsaw): From both the scientific standpoint, and also to avoid any possible legal turn of events, I think it is a very good plan to have both the distant and near vision taken of both eyes, no matter what the eye condition is. Of course with a penetrating wound of the eye it is more essential. If this is done before any treatment is begun, then you have your data, you have your facts as to what that vision actually was. That is often a very valuable thing to go back to afterwards, for the patient's benefit and for your own reference.

DR. CHARLES J. ADAMS (closing): There is one point that I would like to mention again and to emphasize, and that is the use of the subconjunctival injections. I will report a case in point.

A little girl who was congenitally blind in one of her eyes stepped on a half of a metal barrel

hoop. The other end flew up and struck the little one on her good eye, penetrating the cornea. The child was brought to my office and I covered the wound with conjunctiva but I did not use any subconjunctival injections. Really it was the only case of any importance in which I have not used this method. The eye apparently did very well for a few days but had an unfortunate termination. Sepsis resulted, and the eye-ball had to be enucleated.

I believe that patients will forget pain, but they do not forget the loss of their vision, and I see no reason why this method should not be used in every case that is at all serious.

I live in a factory town, and we have a great many injured eyes there. I have had many cases where, for example, the eye-ball was cut through the cornea, through the uvea and sclera, in some cases probably a half an inch. They were terrible wounds, but I have repaired them, using the subconjunctival injections of mercury oxycyanide, and never had a shadow of sepsis, and in some cases with as good as 20-40 and 20-30 vision.

If there is anything in the paper which is of importance and should be impressed upon your minds, it is the use of subconjunctival injections, for I believe it is the most important procedure you can take in the handling of these cases. The rest of your treatment may not amount to anything if this method is not used.

PUERPERAL ECLAMPSIA*

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This paper begins with quotations from Lusk:

"Puerperal eclampsia is a term used to designate the convulsions occurring during pregnancy and child bed, due to some toxic conditions peculiar to the pregnant state. The estimated frequency of the occurrence of eclampsia is one to five hundred labors, and the death rate from 14 to 32.4 percent. In a vast majority of cases the victims of eclampsia are primipara. At least 75 percent are primipara, and very nearly all the rest occur in second labors. The disease seldom occurs prior to the sixth month of uterogestation, and the majority of the cases begin during or just after labor. Usually the disease is preceded by some premonitory symptoms, the most constant of which is headache. Among the other premonitory signs may be mentioned ringing in the ears, flashes of light before the eyes, and nervous agitation.

In most of the cases the beginning is abrupt, either during or shortly after labor. Beginning during labor, the convulsion is sometimes preceded by a moment of calm. The patient ceases

to complain, and appears to be sinking into a quiet slumber. This lasts only a few minutes, or maybe seconds. The eyes open, the pupils contract. The orbicularis oris muscle contracts, giving the patient a smiling aspect. Then in a few seconds the eyes open and shut rapidly, the eyes move from side to side or roll upward, while the pupils dilate and lose their sensibility to light. Very rapidly the convulsive twitching extends to the other muscles of the face. The mouth opens and is drawn to one side, the head moves from shoulder to shoulder, sometimes with lightning rapidity, the convulsive movements extend to the extremities and in severe convulsions the tongue is frequently bitten and the patient froths at the mouth. As a result of the disturbance of the circulation the carotid pulsates, the veins of the neck swell, and the face becomes cyanosed. The heart's action becomes irregular and intermittent and the breathing irregular and stertorous."

"In tonic convulsions, which occur intercurrently with clonic ones, the head is drawn to one side, the mouth and eyes in the same direction, the jaws open and close, opisthotonos or pleurothotonus develops, the pulse becomes small and intermittent, the respiration is suspended, the body covered with cold and clammy sweat, and often involuntary micturition and defecation takes place. The tetanic condition often lasts from fifteen to thirty seconds, gradually diminishing in intensity. As the convulsions cease, the distortion of the face relaxes, the mouth opens, and frothy saliva tinged with blood escapes from the mouth and nostrils, and stertorous breathing marks the beginning of sopor. The depth of the sopor is in proportion to the severity of the attacks.

"When the convulsions are repeated, the patient in the intervals can no longer be aroused, but passes into a state of complete unconsciousness. The duration of a single attack seldom lasts over a minute, and owing to the suspended respiration in the very nature of things could not last long and the patient live. In the milder cases, occurring during labor, the convulsions cease with the emptying of the uterus, or rapidly diminish in severity, but in severe cases I have seen them continue in almost unabated severity for 48 hours after delivery."

Of the complications that may occur with convulsions may be mentioned post partum hemorrhage, puerperal inflammation, amblyopia, puerperal mania, and other psychical disturbances. In fatal cases death may be due to carbonic acid poisoning, to tetany of the respiratory muscle or exhaustion of the nervous system, or from asphyxia from swelling of the tongue.

The prognosis is always serious and, as before mentioned, the mortality ranges from 14 to 32.4 percent. The earlier convulsions occur

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in labor, the more unfavorable the prognosis. I have met with nine cases of eclampsia that I can recall in my own practice, and five in consultation with other physicians. Of my nine cases, three occurred before labor. All were primipara. One was a miscarriage, about the end of the fifth month, in which convulsions began early and continued until some time after the uterus was emptied, but ceased soon after and she recovered completely. One of the others occurred about the first week of the eighth month. She had a rapidly developing edema, almost amounting to general anasarca. Scanty urine with a high percent of albumin. The convulsions were terrific and followed each other in rapid succession. After the second convulsion she was unconscious practically all the time. The arterial tension was high, pulse hard, small and vibratil. The tension was somewhat relieved by *Veratrum viride*, 15 drops hypodermatically. The membranes were punctured to induce labor, salines were given freely per rectum, and citrate of potassium twenty grains in water every four hours when she could swallow. The tincture *Veratrum* was given in fifteen or twenty minim doses every three or four hours without any undue depression. Labor came on after three days and after the uterus was emptied she slowly recovered.

One of the worst cases I have ever seen had her first convulsion about four hours after the completion of an otherwise normal labor. There was no edema in this case or anything to call attention to the impending attack. Labor was not prolonged beyond the usual time of normal labor for primipara, but just after labor she complained of headache and was restless. I saw her again in two hours. She was still restless and complained of headache and appeared somewhat excited. I gave one-fourth grain morphine hypodermatically. I then left town for about two hours, and when I returned I found her in convulsions. In the meantime Dr. Bird had been called after the first convulsion. He managed to get a small amount of urine by catheter, and found it heavily loaded with albumin and excessively acid, and had left a note for me to that effect. When I arrived I found her in a convulsion again, after which she lapsed into complete unconsciousness. The convulsions were partially controlled by chloroform, but continued through the night and next day, notwithstanding the fact that she was given potassium bromide 30 grains and chloral hydrate 10 grains per rectum every three hours. The colon had been flushed with normal salt solution, and during the day we managed to get 5 grains of calomel down. About four p. m. I called Dr. Bird and asked him to bring an ounce of Norwood's tincture of *Veratrum* with him. When he arrived the patient was completely

unconscious, and most of the time when not under chloroform she was in terrific convulsions; temperature 104, pulse small vibratil, pupils dilated, breathing stertorous when not under chloroform. We began with 15 minims by the hypodermic method, increased the second dose to 20 minims, and the third dose was increased to 25 minims. The dose was repeated every two hours. After the third dose, the pulse became softer and fuller, the breathing improved, the skin became moist and the interval between convulsions was lengthened. After midnight chloroform was only administered for short intervals during convulsions. The last light convulsion occurred about 4 a. m., the last dose of *Veratrum* about 5 a. m., soon after which the patient slept quietly for several hours, and then gradually returned to consciousness. No more convulsions occurred.

As to the cause or causes of puerperal eclampsia nothing definite is known, scarcely any two writers agreeing altogether as to the pathogenesis of the disease. Lusk was firmly of the opinion that the renal insufficiency was the chief underlying cause of eclampsia. Sajons defines eclampsia as an acute disorder of pregnancy, due to an accumulation of waste products in the blood owing to the inability of the adrenal system to convert the excess of wastes due to the presence of the fetus into benign and eliminable end products; others hold that the placenta is the source of some toxin which is the primary exciting cause of the trouble, and still others, that the fetus is the source of the poison. As we study these propositions we find that neither of them offers a satisfactory solution of the problem that confronts us. We will now briefly notice these propositions:

First. Renal insufficiency. In my experience in every case of eclampsia, there has been more or less diminution of the volume of urine passed, sometimes almost amounting to suppression, marked albuminuria with intense acidosis, and, in nearly all, more or less edema. Casually it would be easy for me to conclude that the eclampsia in all my cases was due to renal insufficiency; but when we study the subject more closely, we find that many women have more or less marked albuminuria with acidosis and high blood pressure who do not develop eclampsia.

Second. In many fatal cases, kidney lesions are not found, or are wholly insignificant.

Third. Convulsions are rare in chronic Bright's disease.

Fourth. In many cases of true uremia with suppression of urine, convulsions do not occur.

Urea, the principal product of proteid metabolism excreted by the kidneys, is formed principally by the liver, and comes to the kidneys in the blood preformed, hence the lessened

amount of urea excreted is no evidence of renal insufficiency, but is more likely due to functional inactivity of the liver whereby the normal metabolic processes by which urea is formed are in some way interfered with, with the consequent retention of the nitrogenous antecedents of urea in the blood. Wells:—"Of the known constituents of the urine there are few that are toxic to any considerable degree, and these occur in but very small quantities. Urea is generally considered as absolutely non-toxic, the animal body withstanding the injection of large quantities without appreciable injury."

Urinary changes are practically invariably present in eclampsia, and usually they are profound, although there are no known characteristic qualitative or quantitative differences from the urinary changes of puerperal albuminuria without eclampsia. Proteins are abundant, including a large proportion of globulin, decreasing rapidly after delivery as a rule.

The urea is usually very low but generally increases very rapidly after delivery until two or three times the normal amount is passed per day. As urea and ammonia do not seem to be greatly increased in the blood, this has been interpreted as indicating that during eclampsia there is an accumulation of the precursors of urea in the system. The toxicity of the urine in normal pregnancy is very much increased if the kidneys are unimpaired by nephritis, but decreased if the permeability of the kidneys is impaired by nephritis. These findings all indicate that oxidation within the body is decreased. The theory that the fetus is the source of some special poison has been advanced by some writers, but with no proof whatever to sustain it. "However, there is some plausibility in the idea that eclampsia is initiated by the excessive products of metabolism, from both the fetus and her own over-active system, being thrown into the blood, thus causing injury to the kidneys, leading to further retention, or injury to the liver so that the normal metabolic processes of the liver cannot be carried on; or perhaps both liver and kidneys are impaired, as well as other organs, thus forming a vicious circle which may lead to an overwhelming of the maternal system by poisons derived from both her own and the fetal tissues. This is purely speculative." (Wells.) Some other writers have thought that the placenta was the source of the poison—that in some way placental cells found in the blood of eclamptic women were concerned in the production of the disease.

Concerning the ductless gland theory of eclampsia, I think there is some room for speculation, but as yet it is all speculative. It has long been known that in normal pregnancy the thyroid gland is enlarged to a greater or less

degree, and that in eclamptic women that enlargement is always diminished or absent; also that eclampsia is notably frequent in myxedematous women.

We also know that the activity of the organs chiefly concerned with digestion and oxidation are in some way profoundly influenced by the so-called internal secretions. We recognize the fact that injury or disease of the adrenals profoundly affects the vital process, but just why or how this should happen in pregnancy we do not know. Then, in view of the unsettled state of the pathogenesis of the disease, our management must be largely empirical. The ductless glands have been thought by some to be mainly responsible for the failure of proteid metabolism that cause the retention of these products in the system until the maternal system was overwhelmed by unoxidized products of nitrogenous material. We also know that the activity of the organs chiefly concerned with the vital processes of oxidation and elimination are profoundly affected by the internal secretions. This is evidenced by the fatal effects of disease of the adrenals, but just how or what relation these may sustain to eclampsia we do not know. I very seriously doubt that any specific poison is the cause of eclampsia, or that the disease is due to the functional failure of any single organ, but believe faulty elimination by all the excretory organs is the cause. Of these I would place first in importance the bowels, second the kidneys, third the skin.

In my experience I have found women especially prone to constipation brought on chiefly by neglecting the calls of nature, and in most of my cases of eclampsia a history of constipation was present. Then again, I have noticed that in most of my cases the opportunities and conveniences for regular bathing were often absent, and I can readily see how these combinations of circumstances may lead to a condition in which elimination may be so retarded as to endanger the functional activity of all the organs concerned in the process of oxidation and elimination. In our efforts to find a specific poison to account for eclampsia, it seems to me that investigators have overlooked one of the chief factors in the pathogenesis of the disease, to-wit: the individual—the nervous susceptibility of the patient to the irritation of the retained products of proteid metabolism. We frequently meet with cases of albuminuria in pregnancy, with marked edema, acidosis and high arterial tension, and yet they go through labor and child bed without convulsions. We see the same thing occur in uremia. We meet with the same thing in the fevers and intestinal troubles in children. Only a few of these cases develop convulsions, though the pathology may be practically the same in all of them.

I think eclampsia may be accounted for by recognizing the peculiar nervous susceptibility of the individual. I believe the disease is preventable in almost every case, except perhaps in some few cases wherein the victim is the subject of chronic Bright's disease, and even then, much may be done toward preventing uremic symptoms until late in the progress of the kidney lesions. These are cases of true uremia, however, and differ very materially from true puerperal convulsions.

In view of our limited knowledge of the pathogenesis of the disease, our management must naturally be largely empirical. Treatment should be first prophylactic, second palliative, and third curative. Prophylactic treatment, however, to be efficient must be instituted early. The prospective mother should be instructed in the matter of personal hygiene. She should be early impressed with the absolute necessity of keeping the bowels active as well as giving careful attention to the skin and kidneys. With careful supervision of the woman's health during the latter months of utero-gestation, eclampsia would, I think, be a very rare occurrence.

The urine should be examined frequently, and with the first appearance of edema or excessive acidity or albumen, strict regulation of the diet should be exercised. Meats, especially red meats, and eggs should be prohibited, and the diet restricted to milk and butter, together with cereals and fruits. Strict attention to the bowels should be observed. They should be kept freely open by salines with an occasional dose of calomel. To reduce the acidity of the urine I have never found anything as effective as potassium citrate three times a day, twenty to thirty grains in a glass of water, one hour after meals. For the pyrosis which is so troublesome in some of these cases, I have found calcined magnesia—twenty grains half hour after meals—quite effective, and it often acts as an efficient laxative, obviating the necessity of other cathartics. If this kind of supervision of prospective mothers could always be exercised, eclampsia would be of very rare occurrence.

Unfortunately, however, the majority of these cases are not seen by the physician until labor has set in, or the patient is already in convulsions. In all of my cases, the patient was either in convulsions or labor had set in when I was called. In every one I had marked albuminuria, acidosis, high arterial tension, with, so far as I have been able to ascertain, constipation and scanty urine, in some cases amounting almost to suppression.

The indications for treatment after eclampsia has developed are: First, to control or ameliorate the convulsions; second, to re-establish the secretions and obtain elimination of the pent-up products of proteid metabolism.

To obtain elimination, five to ten grains of calomel should be placed far back on the tongue, followed by some saline as soon as the patient can be made to swallow. My preference is a saturated solution of epsom salts, a teaspoonful given every half hour. The colon can be flushed with normal saline solution. Of medicine to relieve or control the convulsions, potassium or sodium bromide and chloral can be given per rectum in the following dosage: Ten grains of chloral and sixty grains of the bromides. Unfortunately, however, the rectum frequently refuses to retain anything, and the same is true of the stomach. Morphine has been advocated by some writers and may sometimes control the convulsions in mild cases, but I confess that I have never been able to find a plausible reason for giving morphine in a condition where the patient already is poisoned upon her own pent-up secretions. I have found it almost impossible to get the bowels to move for at least twenty-four hours after giving a full dose of morphine hypodermatically. I have found Norwood's tincture of *Veratrum viride*, given by the hypodermic method, the most effective remedy in controlling the high blood pressure and relieving some of the most pressing symptoms of the disease, *but* to be effective it must be given in full doses of 15 to 25 minims, and it must be given hypodermatically. Given in this way I have seen a small, thready pulse of 120 per minute become full and soft, and a hot, dry skin become moist without any tendency to collapse whatever. The dose should be repeated every two hours until the pulse rate is reduced to normal or nearly so, and then continued in smaller doses and at longer intervals to maintain its effect. The remedy should never be given by the mouth because owing to its local irritating effects upon the stomach mucosa it will produce nausea or vomiting, with symptoms of collapse, which I have never seen when given, even in twenty-five minim doses, by the hypodermic method, and I have given it in some cases every two hours all night, thereby saving my patient's life.

I have never resorted to venesection in any of my cases except one. In that case I had excessive edema, with total suppression of urine and complete unconsciousness. I delivered her of a dead fetus while in that state, and some hours after, I took one pint of blood from the arm, but she never regained consciousness, and died about two hours later. That was the only case I have ever lost, and in fact is the only one I have ever seen die except two occurring in the practice of other physicians, in which cases forcible instrumental dilatation was used to empty the uterus. I assisted in one of these. In both cases convulsions came on about the fourth or fifth month, and neither of them ever

regained consciousness. I think in both of these cases it would have been better to have punctured the membranes and waited for nature to expel the fetus, and in the meantime to have controlled the symptoms as best we could by appropriate remedies. But few women will withstand the shock of forcible instrumental dilatation while in this condition.

It is always desirable to empty the uterus as soon as possible, but as yet the records do not show that forcible instrumental measures have in any way lowered the rate of mortality in these cases. In fact, I think statistics will show a higher rate of mortality for Cesarean section, either abdominal or vaginal, than is obtained by the expectant method. Dilatation with Barnes' bags, or the cervical tampon gently introduced and slowly inflated will do much to assist nature in dilating the cervix, and when we have sufficient dilatation, the forceps may be applied under anesthesia and the labor terminated. I am aware that the use of chloroform is condemned by many good men in the profession, but I have used it freely to control convulsions in all my cases, and have seen no harmful effects. I think it lessens shock, relaxes muscular tension and aids in this way the dilatation of the cervix.

DISCUSSION

DR. JANE KETCHAM (Indianapolis): Dr. Moore has brought before us one of the most important subjects in obstetrics. The more eclampsia I see the more I wonder that these patients ever get well. The way to treat these cases is by means of elimination, first by the bowel and then by the skin. The kidneys are not going to do their work, so we must stimulate by the other two channels. In the presence of an increasing systolic pressure, I feel that the uterus should be emptied and the earlier the better. Toward this end I have used pituitrin. This we all know is a dangerous drug, and I do not use it at all if there are any contractions of the uterus. In a quiet uterus I do use it, and in these cases it is of great help. You all know how difficult it is to dilate manually a cervix which has made no effort at dilatation. My preference is to give 5 minim doses every two hours until three doses have been given, but remembering that the action of the pituitrin is very fleeting, I have no hesitancy in a grave situation in using 1 c. c., but not repeating it. In eclampsia I have repeatedly given a full c. c. Several times I have been able to induce labor without going into the uterus at all.

I would like to cite the case of a patient who came into the City Hospital this year for bleeding. She was 26 years old, a six para. There was no evidence of bleeding after she was admitted to the hospital and she was put to bed

under systematic observation. The systolic pressure was 140 and no evidence of renal disturbance was present. A phenolsulphonephthalein test was done the day of admission. At the end of three days the interne called me saying that she had had a convulsion which lasted eight minutes, with a systolic pressure of 195, diastolic 140. I went out and observed the patient in coma. We gave her five grains of calomel and magnesium sulphate 1 ounce by stomach tube, and put her in a hot pack with ice to the head. We also gave her 5 minims of pituitrin and repeated this at two hour intervals until three doses had been administered. At this time the systolic pressure was 250, diastolic 100. There were no further convulsions, but she was deeply in coma. We gave her ether and went into the vagina for the first time, and found about a dollar dilatation. It was comparatively easy to complete the dilatation and I went in and removed a six and a half pound fetus, which drew a few breaths, then died. It was definitely syphilitic.

At this time, before the class, we did a venesection and removed 600 c.c. of blood which was replaced by normal salt and glucose. I never attempt to remove the placenta in less than half an hour after delivery; in this case we tried desperately to remove the placenta but were unable to do so. My rule is to keep out of the uterus, but in this case it seemed we had to get that placenta. First I went in, and then the interne, but we were absolutely unable to get it, it stuck tighter than the paper on the wall. It was then a question of going through the uterine wall or leaving the placenta in. The patient was in a very bad condition, so we left the placenta in and began treating for shock. The following day we gave her pituitrin and applied an ice-bag over the fundus, and the third day, under gas anesthesia, we delivered the placenta very readily.

It has been my experience that all cases of eclampsia have a marked hyperpyrexia following eclampsia. I do not usually fear this, but this woman was very pronounced. She ran a rectal temperature of 106 degrees F. for several days. She was in coma for two or three days following delivery; there was no urine during that time, but we had free sweating and movements from the bowels, and we were not alarmed even in the face of this marked hyperpyrexia. She improved in four days, or, in reality immediately after removing the placenta. This woman had enough to kill her on several different scores; she had the lues, the eclampsia, and the danger of infection, but she made a recovery.

I had another case in a primipara with a general anasarca. She had a very badly impaired kidney function, but after she came into the hospital the urine showed absolutely nothing.

Her condition was fair and she was not in labor. Her condition remained fair for two days and then the anasarca began to melt away. We measured the intake and output, and with an output of 3000 she had an intake of only about 1000. Then her pressure began to increase and, after one convulsion, we delivered her of a living child by forceps. I feel sure that if she had gone on the condition would have become eclamptic. As long as she had her anasarca her condition was good, but as soon as it disappeared her condition became bad.

Too much importance cannot be placed on the early emptying of the uterus and the elimination, by the skin and by the bowel, with as little kidney irritation as possible.

DR. H. D. FAIR (Muncie): I believe elimination is the chief thing in eclampsia, and in addition to giving the Veratrum I try to make my patients sweat and sweat vigorously just as quickly and profusely as possible. Of course Dr. Moore's results prove the value of his treatment. He has never lost a case of his own, but it seems to me that when we add chloroform to the septic condition we are adding to the patient's burden. Personally, I do not use chloroform; if an anesthetic proves necessary I would prefer ether.

DR. WILLIAM MOORE (closing): I think, owing to the brilliant results of modern surgery, there is a tendency toward interference, and the performance of Cesarean section in many of these cases that is not warranted by the results obtained.

Forty years ago some old doctor from California spoke of the use of Veratrum in the treatment of eclampsia, and frequently since then

men prominent in obstetrical practice have spoken of the usefulness of Veratrum in puerperal eclampsia. But, in general use, the proper method of administration has not been understood. It has fallen into disrepute with quite a number of obstetricians because they have given the remedy by the oral method. Given in this way, even in ten minim doses, it frequently will produce nausea and depression, which never occur when given hypodermatically. The nausea, I think, is due to the local irritating effects of the remedy upon the mucosa of the stomach. I know that Barthelow claimed that the nausea was due to the systemic and not the mechanical effect of the drug, but I am convinced, after using it in quite a number of cases, in twenty-five minim doses hypodermatically, and repeating the dose every two or three hours for several hours, without nausea or depression, that it is not systemic.

I do not believe that eclampsia is due to the presence of fetus in utero, because, as I trace the history of the disease, I find that at least one-third of all cases occur after the uterus has been emptied—some of them coming on from ten days to two weeks after delivery.

In cases coming on several hours before delivery, I think Veratrum will stand you in hand better than any other remedy. It controls some of the most pressing symptoms; it lowers blood pressure; it acts upon the skin; and it brings the pulse down. My rule for giving it always has been to give a large dose hypodermatically every two or three hours until the pulse is brought down to normal, or nearly so, and then at longer intervals, but in sufficient doses to maintain its effects.

Dr. C. G. Broeman, Cincinnati, Ohio, in the June issue of the *Kentucky State Medical Journal*, presented some interesting facts concerning radium:

The author calls attention to the fact that the popular impression that radium treatments are very expensive is far from the truth. The patient saves considerable time and money because no extended sojourn to the hospital is necessary. There is very little interruption to his or her regular duties. Treatments are painless and there is no period of convalescence.

Radium is the ideal treatment for all forms of basal-celled epithelioma and for prickle-celled epithelioma if seen early enough and no glandular involvement is present.

In carcinoma of the lip it is the treatment of choice when the case is seen early.

Radium is to be preferred in certain uncomplicated cases of uterine fibroid and bleeding.

Radium should be universally used in cancer of the cervix and inoperable cancer of the body of the uterus.

In all forms of inoperable cancer it relieves

pain and hemorrhage and lessens discharge.

Radium is to be preferred to the x-ray in cases of goiter because of its exact dosage, deep penetration and ease of application.

It is the preferred treatment in tuberculous adenitis and vernal or spring catarrh while in certain systemic diseases, such as splenomedullary leukemia, pernicious anemia, and Hodgkin's disease radium therapy has proved beneficial.

In dermatology radium improves and eradicates many heretofore stubborn and incurable dermatological conditions among which may be mentioned angioma, lymphangioma, keloids, lupus erythematosus and vulgaris, chronic eczema of the mucous membrane of the lips, warts, sycosis vulgaris, intractable pruritis, localized eczema, leucoplakia, extensive hypertrichosis and other skin affections.

From my own experience I feel justified in affirming that radium is here to stay and that the physician who is not willing to recognize its value in medical science is simply refusing to read the handwriting upon the wall.



DAVID ROSS
President of the Indiana State Medical Association, 1920-1921



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WARREN

THE INDIANAPOLIS SESSION

The 1921 session of the Indiana State Medical Association will be held in Indianapolis. Wednesday, Thursday and Friday, September 28, 29 and 30, 1921. Indianapolis and its attractions as a meeting place for the Association are so well known to the members that a detailed description and write-up, as is the usual custom, is superfluous. Indianapolis is centrally located and easily accessible from all parts of the state. The medical men of that city are genial hosts, and extend a cordial greeting and welcome to the visiting doctors and their wives and friends.

PLACE AND TIME OF MEETINGS

The Claypool Hotel has been selected as general headquarters of the Association. There the members will register, and there also will be held all of the meetings of the Association.

On Wednesday afternoon at 4:30 o'clock the Council will hold its first meeting in the Palm Room. On Wednesday evening at 7 o'clock the House of Delegates will convene for its first meeting in the Palm Room. The final meeting of the Council will be held in the Palm Room Friday afternoon at 2 o'clock; and the second or final meeting of the House of Delegates will be held on Friday at 11 a. m. in the Riley Room. The smoker and get-together meeting on Wednesday evening will be held in the Assembly Hall of the Claypool Hotel, 8th floor, and the annual banquet on Thursday evening will be served at six o'clock in the Riley Room. The general meetings on Thursday morning and Friday afternoon have been assigned to the Assembly Hall on the eighth floor, and the Section on Surgery has been assigned to this same room for its meetings on Thursday afternoon and Friday forenoon. The Palm Room has been selected for the meeting place of the Section on Medicine, and the Florentine Room has been assigned to the Eye, Ear, Nose and Throat Section.

Special clinics have been arranged by the Indianapolis doctors for Wednesday afternoon at the following hospitals: Robert W. Long,

Indianapolis City, Methodist, and St. Vincent's. Doctors desiring to attend are asked to notify the Committee on Arrangements in advance.

The Indiana University School of Medicine will serve a luncheon on Thursday noon at the University Building on West Michigan Street. The University also has taken over the Scientific Exhibit for this year, and this will be on display at the University Building during the entire session.

The visiting ladies will be entertained at the Circle Theatre and at a tea given at Dr. Ross' Country Place.

REGISTRATION

Members are requested to register immediately on arrival in the city. The Registration

Desk and Information Bureau will be located on the eighth floor of the Claypool Hotel. Registration will be by membership card, and to avoid delay and confusion members are urged to have their cards ready for inspection by the Registration Committee. Registering members are asked to indicate the number of ladies in the party so that the Committee on Entertainment may know early the number to be provided for. Badges will be furnished the members for identification. Letters and telegrams may be sent to the Claypool Hotel in care of the Committee on Registration.

HOTELS

The Claypool Hotel is the headquarters of the Association. Arrangements have been made to reserve one hundred rooms at this hotel for members of the Association. These reservations can be made through the Committee on Arrangements by addressing them at 422 American Central Life Building, Indianapolis, Indiana.

OFFICIAL CALL TO THE HOUSE OF DELEGATES

The next annual session of the Indiana State Medical Association will be held at Indianapolis, Wednesday, Thursday and Friday, September 28, 29, and 30.



CHAS. N. COMBS
Terre Haute
Secretary Treasurer

The House of Delegates will be constituted as follows: Marion county, 7 delegates; Allen county, 2 delegates; Lake county, 2 delegates; St. Joseph county, 2 delegates; Vanderburg county, 2 delegates; Vigo county, 2 delegates; the other 78 counties each 1 delegate (two more paid-up memberships will entitle Delaware-Blackford county to one more delegate); the 13 councilors, the President, the Secretary of the Association, the Editor of *THE JOURNAL*, and the ex-presidents, namely Drs. Edwin Walker, G. F. Beasley, C. S. Bond, M. F. Porter, Sr., W. N. Wishard, J. C. Sexton, G. W. McCaskey, A. W. Brayton, J. B. Berteling, G. T. McCoy, D. C. Payton, Samuel Kennedy, W. F. Howat, A. C. Kimberlin, J. P. Salb, F. B. Wynn, G. F. Keiper, J. H. Oliver, J. R. Eastman, W. H. Stemm, C. H. McCully. Two other ex-presidents, Drs. Jonas Stewart and G. W. H. Kemper, are still living, but are retired.

Properly executed credentials for delegates should be sent to Dr. A. L. Marshall, Indianapolis, or brought to the session. No delegate will be seated unless wearing the official badge.

The House of Delegates will convene promptly at 7 p. m., Wednesday, September 28, in the Palm Room, Claypool Hotel; and again at 11 a. m., Riley Room, Friday, September 30.

The order of business will be as follows:

1. Call to order by President.
2. Roll call and seating of qualified delegates.
3. Reading minutes of previous meeting.
4. Report of Secretary-Treasurer.
5. Reports of standing committees: (a) Administration and Medical Defense; (b) Publication; (c) Public Policy and Legislation; (d) Medical Education; (e) Industrial and Civic Relations; (f) Health Problems in Education; (g) Hospital Standardization; (h) Scientific Work; (i) Scientific Exhibit; (j) Necrology; (k) Credentials; (l) Arrangements.
6. Reading of Communications.
7. Reading of memorials and resolutions.
8. Unfinished business.
9. New business.
10. Adjournment.

Election of officers will be the first order of business Friday at 11 a. m. In addition to the regular officers the terms of the following expire January 1, 1922, and their successors must be elected at this session: Delegates to the American Medical Association to succeed Albert E. Bulson, Jr., Fort Wayne; George W. Spohn, Elkhart; Alternates, C. D. Humes, Indianapolis, and B. D. Myers, Bloomington, to be elected for the ensuing two years. Delegates must have been members in good standing of this Association and of the American Medical Association for the past two years. Member of the Committee on Administration and Medical Defense, to succeed Dr. E. M. Shanklin, Hammond, for

the ensuing three years. Member of the Committee on Hospital Standardization to succeed Dr. W. H. Stemm, North Vernon, for the ensuing five years.

Delegates from counties comprising the Second, Fifth, Eighth and Eleventh Districts are reminded that their councilors' terms will expire on December 31, 1921, and new councilors should be elected to succeed the following: Second District, J. B. Maple, Sullivan; Fifth District, Spencer M. Rice, Terre Haute; Eighth District, E. M. Conrad, Anderson; Eleventh District, G. G. Eckhart, Marion.

CHAS. N. COMBS, Secretary.

ANNOUNCEMENTS

The Shopping District is known to all who attend, and the stores and shops of Indianapolis will be glad to extend any reasonable courtesy.

Essayists are reminded that all papers presented before the Association become the property of the Association, and, therefore, are not to be published or submitted for publication elsewhere than in *THE JOURNAL* of the Indiana State Medical Association.

Wednesday evening will be given over to the annual smoker and general get-together meeting of the session. There has been provided an interesting program—perhaps not too serious in nature but of such character to make one forget his usual self and enjoy the lighter moments for an hour or two.

The members and those accompanying them are requested to register upon their arrival. The bureau of information and registration is in the Claypool Hotel. Present your membership cards when registering. Members without their cards may register after their standing has been verified by consulting the records.

The election of officers will be the first order of business at the meeting of the House of Delegates held Friday at 11 a. m. No member of the House of Delegates is eligible to office, and delegates to the American Medical Association must have been members in good standing of the A. M. A. for the past two years.

You are requested to wear the official badge which is supplied when you register, when attending or participating in the meetings. Members of the House of Delegates will have designating badges. Only those who are accredited delegates are entitled to vote at the meetings of the House of Delegates, or even to address the House of Delegates without special permission.

The Annual Dinner will be held Thursday evening in the Riley Room of the Claypool Hotel. This will be one of the most important features of the session. Surgeon General of the Army, Merritt W. Ireland, will be the speaker of the evening, and needs no introduction to the medical profession of Indiana. Being a Hoosier it is needless to say that he will be greeted by a large audience.

Register early. The booth for registration will be open Wednesday afternoon at one o'clock, and be open throughout the session. Please have your pocket cards with you in order to avoid delay in registration. If you have paid your dues to your county society secretary *only recently*, and have not yet received your membership card, present a receipt from the county secretary and you will be permitted to register. Please get your badge and wear it.

The Indiana University School of Medicine will serve a luncheon at the University Building—West Michigan street—at 12:30 p. m. Thursday. There will be provision made for transportation to and from the luncheon, providing at the time of registration the members indicate their desire to attend. There will be further information furnished by a representative of the School who will be in attendance during Wednesday afternoon and Thursday morning.

Essayists should bear in mind that their papers as presented at the Indianapolis session represent copy for *THE JOURNAL*, and accordingly the title and full name and address of the essayist should appear at the top of the manuscript, and the body of the manuscript *should be carefully edited*. Attention to the paragraphing, punctuation, capitalization and grammatical construction of sentences will go a long way toward helping the editor and printers. All manuscripts should be typewritten.

The Local Committee on Arrangements reports that the medical profession of Indianapolis has arranged a series of clinics to be conducted by members of the Indianapolis Medical Society to be held on Wednesday afternoon, September 28. It is urged that those wishing to attend these clinics send their names to the Committee on Arrangements so that proper provision can be made for caring for all who wish to attend. The following hospitals have made arrangements for the clinics: Robert W. Long Hospital, Indianapolis City Hospital, Methodist Hospital, St. Vincent's Hospital. The Committee on Arrangements is as follows: Drs. C. H. McCaskey (Chairman), C. D. Humes, Alfred Henry, A. B. Graham, Robert M. Moore.

There will be ample entertainment for the ladies during the entire session. Those who arrive Wednesday will be cared for providing their names are given to the registrar during the afternoon. This will give the committee an idea of the number to be cared for and the committee will be pleased to see that all visiting ladies are properly entertained. Seats at the Circle Theater will be provided visiting ladies and all are invited to a tea at Dr. Ross' country place. The local committee in charge is as follows: Mrs. C. H. McCaskey (Chairman), Mrs. Homer Hamer, Mrs. Ross Ottinger, Mrs. George Kohlsteadt, Mrs. Chas. F. Neu, Mrs. Alfred Henry, Mrs. M. J. Barry, Mrs. Chas. E. Cottingham, Mrs. E. B. Mumford, Mrs. Virgil Moon, Mrs. Bernard Erdman, Mrs. Edgar Kiser, Mrs. Frederick Warfel, Mrs. D. O. Kearby, Mrs. Ed Clark, Mrs. John F. Eherwein, Mrs. A. B. Graham, Mrs. Helen Hare, Mrs. C. P. Emerson, Mrs. W. D. Gatch, Mrs. Fred Pettijohn, Mrs. O. C. Laikenbill, Mrs. R. O. McAlexander, Mrs. E. D. Clark, Mrs. John H. Oliver, Mrs. J. W. Carmack, Mrs. P. E. McCown, Mrs. Frank B. Wynn.

CONDENSED PROGRAM

Wednesday, September 28

AFTERNOON

Meeting of the Council, at 4:30 p. m., Palm Room, Claypool Hotel.

EVENING

Meeting of House of Delegates, 7 o'clock, Palm Room, Claypool Hotel.

Informal smoker and get-together meeting, 8 o'clock, Assembly Hall, 8th Floor, Claypool Hotel.

Thursday, September 29

FORENOON

General Meeting, 8:30 a. m., Assembly Hall, 8th Floor, Claypool Hotel.

No section meetings.

AFTERNOON

Meeting of Section on Surgery, 2 p. m., Assembly Hall, 8th Floor, Claypool Hotel.

Meeting of Section on Medicine, 2 p. m., Palm Room, 9th Floor, Claypool Hotel.

Meeting of Eye, Ear, Nose and Throat Section, 2 p. m., Florentine Room, 2d Floor, Claypool Hotel.

EVENING

Annual Banquet, 6 o'clock, Riley Room, Claypool Hotel, Surgeon General of the Army, Merritt W. Ireland, to be the guest of honor and speaker of the evening.

Friday, September 30

FORENOON

Meeting of Section on Surgery, 9 a. m., Assembly Hall, 8th Floor, Claypool Hotel.

Meeting of Section on Medicine, 9 a. m., Palm Room, 9th Floor, Claypool Hotel.

Meeting of Eye, Ear, Nose and Throat Section, 9 a. m., Florentine Room, 2d Floor, Claypool Hotel.

Meeting of House of Delegates, 11 a. m., Riley Room, Claypool Hotel.

AFTERNOON

Meeting of Council at 2 p. m., Palm Room, Claypool Hotel.

General Meeting, 2 p. m., Assembly Hall, 8th Floor, Claypool Hotel.

OFFICIAL PROGRAM OF THE ANNUAL SESSION OF THE INDIANA STATE MEDICAL ASSOCIATION

TO BE HELD AT INDIANAPOLIS.

SEPTEMBER 28, 29, 30, 1921.

HOUSE OF DELEGATES

First meeting, Palm Room, Claypool Hotel, Wednesday evening, September 28, at 7 o'clock.

Second meeting, Riley Room, Claypool Hotel, Friday morning, September 30, at 11 o'clock.

COUNCIL

First meeting, Palm Room, Claypool Hotel, Wednesday afternoon, September 28, at 4:30 o'clock.

Second meeting, Palm Room, Claypool Hotel, Friday afternoon, September 30, at 2 o'clock.

Additional meetings at the call of the President of the Council.

GENERAL MEETINGS

(ASSEMBLY HALL, EIGHTH FLOOR, CLAYPOOL HOTEL.)

Thursday, September 29, 8:30 a. m.

Friday, September 30, 2 p. m.

SECTION ON SURGERY

(ASSEMBLY HALL, EIGHTH FLOOR, CLAYPOOL HOTEL)

Thursday, September 29, 2 p. m.

Friday, September 30, 9 a. m.

SECTION ON MEDICINE

(PALM ROOM, NINTH FLOOR, CLAYPOOL HOTEL)

Thursday, September 29, 2 p. m.

Friday, September 30, 9 a. m.

SECTION ON EYE, EAR, NOSE AND THROAT

(FLORENTINE ROOM, SECOND FLOOR, CLAYPOOL HOTEL)

Thursday, September 29, 2 p. m.

Friday, September 30, 9 a. m.

COMMERCIAL EXHIBITS

(EIGHTH FLOOR, CLAYPOOL HOTEL)

Wednesday noon to Friday night.

SCIENTIFIC EXHIBIT

(INDIANA UNIVERSITY SCHOOL OF MEDICINE BLDG.)

Wednesday noon to Friday night.

REGISTRATION

(EIGHTH FLOOR, CLAYPOOL HOTEL)

Wednesday afternoon.

Thursday and Friday.

ENTERTAINMENT

Wednesday, September 28, 8 p. m., smoker and get-together meeting. Assembly Room, eighth floor, Claypool Hotel.

Thursday, September 29, 12:30 p. m., luncheon at Indiana University School of Medicine, West Michigan street.

Thursday, September 29, 6 p. m., Banquet, Riley Room, Claypool Hotel.

Entertainment for the ladies—seats at Circle Theater; Tea at Dr. Ross' Country Place.

SCIENTIFIC PROGRAM**GENERAL MEETINGS**

(ASSEMBLY HALL, EIGHTH FLOOR, CLAYPOOL HOTEL)

Thursday, 8:30 A. M.

Organization.

Address of Welcome.

Address of President, Dr. David Ross, Indianapolis.

SYMPOSIUM: ULCER OF THE STOMACH AND DUODENUM

1. B. W. RHAMY, Fort Wayne.

Subject: Ulcer of the Stomach and Duodenum: Etiology and Pathology.

Abstract.—Prevalence, question of age, and location. Pathology of lesions described. Association of gastric and duodenal ulcers.

Percent of lesions in various locations. Possible etiologic factors:

Bacterial origin, endarteritis, hyper-acidity, arteriosclerosis, trauma, diet, anemia, thrombosis, loss of tissue immunity and nerve lesions.

Relation of syphilis to gastric ulcer.

Essential factor is localized loss of vitality permitting auto digestion.

2. W. H. FOREMAN, Indianapolis.

Subject: Ulcer of the Stomach and Duodenum: Diagnosis and Medical Treatment.

Abstract.—The diagnosis and treatment of gastric and duodenal ulcer is considered from the standpoint of gastric secretion, motility and pain. Gastric secretion is influenced by so many factors outside the stomach, that the amount and character of secretion give little knowledge of the pathology in the stomach. While chemical analysis is of little value in diagnosis yet it is important in treatment. Gastric symptoms are motor rather than secretory. Interpretation of gastric motility requires consideration of many factors

in and out of the stomach. Roentgenograms are of minor value; the fluoroscope is of major value. Motor dysfunction may be treated direct or indirect.

Visceral structures are not susceptible to ordinary stimuli which produce pain in somatic structures. Pain and the variability of pain in ulcer are due to visceral tone and irritability rather than to the contact of variable per cents of free acid with the ulcer *per se*. Various types of epigastric pain are diagnosed as ulcer pain. Relief of pain is not a safe guide in treatment.

3. T. B. NOBLE, Indianapolis.

Subject: Ulcer of the Stomach and Duodenum: Indications for Surgical Treatment.

Abstract.—The things indicated in the treatment of peptic or duodenal ulcer are best understood by visualization of the pathological changes leading up to its production, and the sequences attending and following its production.

Broadly considered there are two periods in the life history of gastric ulcer: The first might be designated as the period leading up to the production of the ulcer, and the second the period during which the ulcer is in actual existence.

Logically and rightly the internist is entitled to the first period, but the second belongs to the surgeon as it deals with a condition which does not tend to heal and remain so, but leads to conditions which impair the health and usefulness of the individual as well as to the destruction of life.

4. J. R. EASTMAN, Indianapolis.

Subject: Ulcer of the Stomach and Duodenum: Surgical Technique (Lantern Slides).

Abstract.—Historical review—Anatomic and Physiologic conceptions of operative procedures—Effects of heat—Methods of Suturing—Avoidance of post-operative accidents, etc.

Discussants: Miles F. Porter, Fort Wayne;

A. B. Graham, Indianapolis; W. D. Asbury, Terre Haute; E. D. Clark, Indianapolis.

5. CHARLES P. EMERSON, Indianapolis.

Subject: Treatment of Chronic Nephritis.

Abstract.—In the treatment of that large group of cases which come under the name "Chronic Nephritis" the diversity of etiology should be carefully studied, remembering that in all cases the real condition is only a small part of a more general disease or diseases. In each case the frequent occurrence of acute exacerbations deserves especial attention since these show clearly that the cause is still operative and should, if possible, be removed. A careful consideration of the manner of life and diet is essential.

Discussants: G. W. McCaskey, Fort Wayne; E. F. Kiser, Indianapolis.

Friday, 2 P. M.

1. H. R. ALLEN, Indianapolis.

Subject: The Treatment of Club Feet.

Abstract.—Every congenital club foot is characterized by four constantly present foot deformities, namely, adduction, cavus, equinus, and varus. The permanent and perfect restoration of the deformity as a whole depends upon the restoration of its parts.

Instruments found useful in correcting and maintaining the correction in the extreme possibilities of normal range of position will be demonstrated, together with the essential position of keeping the foot and femur parallel and the popliteal angle always less than a right angle, during the early period of treatment. In this system of treatment no bones are ever cut or broken, but their deformed positions

are rendered normal by releasing the shortened, soft, deformed tissues that are responsible for maintaining the deformity. Normal feet without substituting one deformity for another is the rule under this system in all cases varying in age from six hours to over sixty years.

Discussants: M. I. Rosenthal, Fort Wayne;
G. D. Marshall, Kokomo.

2. G. B. JACKSON, Indianapolis.

Subject: Sterility in the Female.

Abstract.—**DEFINITION:**—Broadly, that condition of the organism which renders the individual incapable of reproduction.

CLASSIFICATION:

1. Primary, absolute, or idiopathic.
2. Secondary, relative, or acquired.

Essentials for fecundity enumerated and the two different classes of sterility discussed.

Emphasis upon:

1. Prevention as related to eugenics—education.
2. Importance of venereal diseases and the male.
3. "Better Obstetrics."
4. Endocrine system.
5. Surgery of the condition.

Discussants: Arnold Province, Franklin;
O. G. Paff, Indianapolis.

3. E. B. MUMFORD, Indianapolis.

Subject: The Treatment of Compound Fractures.

Abstract.—In the past, compound fractures have been considered as potentially infected wounds and all lines of treatment have been directed to combat this infection. To this end the wound has been cleaned with some antiseptic solution and drains have been inserted to take care of any infection which might be left or develop later in the wound.

The treatment of open wounds as developed through the surgery of the World War taught us that the infection which occurred in this type of lesion was due largely to the retention of devitalized tissue which offered a wonderful growing medium for pathogenic bacteria and which, if removed, would leave only fresh, healthy tissue, capable of combating and overcoming the small number of bacteria left. With this teaching in mind, the treatment of compound fractures in civil life should have all of its efforts directed, first to the removal of all devitalized tissue upon which infection could develop, and, secondly, to the closure of the wound without drains in order to prevent any secondary infection.

Compound fracture wounds, due either to direct or to indirect force, whether large or small, should be opened wide under an anesthetic, all devitalized or bruised tissue, except pieces of bone, freely excised, the fracture reduced, the layers of soft tissue sutured as nearly as possible in their normal relationship, and the wound closed tight without drains.

In the writer's series of cases all compound fractures with but one exception were thus converted into simple fractures without infection.

Discussants: H. O. Bruggeman, Fort Wayne;
L. A. Enslinger, Indianapolis.

4. W. U. KENNEDY, Newcastle.

Subject: Traumatic Abdominal Injuries.

Abstract.—After a brief discussion of visceral injury caused by external force producing perforation or laceration, a hitherto undescribed type of abdominal injury caused by external trauma, acting by concussion and producing adhesive peritonitis, is discussed, with case reports.

This type of injury having the early signs of shock, pause and muscular rigidity, the shock subsiding but

the other symptoms persisting, followed later by evidences of intestinal adhesion and obstruction.

The pathology being that of congestive hyperemia induced by disturbance of the sympathetic, with exudate and agglutination, and without sepsis.

The possibility of traumatic appendicitis is recognized and the medico-legal aspects of such injuries in producing varied intestinal disturbances, all having as a basis, intestinal constriction by adhesions, is discussed.

Discussants: E. C. Davidson, Lafayette;
W. P. Williams, Lebanon.

SECTION ON MEDICINE

(PALM ROOM, NINTH FLOOR, CLAYPOOL HOTEL)

Thursday, 2 P. M.

1. JAMES L. GILBERT, Logansport.

Subject: Theory and Practice of Immunology.

Abstract.—Review of outstanding points in history of immunity; also the contributors with their contributions. The reaction found in the process of immunity, together with the nomenclature. The application of immunity in the prevention and treatment of disease.

Discussants: B. W. Rhamy, Fort Wayne;
Frank B. Wynn, Indianapolis.

2. W. A. FANKBONER, Marion.

Subject: Epidemic Encephalitis.

Abstract.—Individual symptoms appear in many other diseases. The symptom—complex and general clinical phenomena do not adapt themselves to our understanding of the ordinary phases and progress of similar disorders. These features together with a fairly distinctive pathology and a suspected epidemiology permit the designation "Epidemic Encephalitis" and justify in a degree that we speak of it as a new disease.

History suggests its occurrence in the remote past. Reliable recognition since 1917.

Etiology not definite. Likely a specific virus.

Pathology fundamentally vascular. Restricted in intensity to basal ganglia, mid-brain pons and medulla. Petechial hemorrhages sometimes larger. Cellular infiltration into white matter. Sometimes affecting gray matter.

Symptoms may range widely; but chiefly in cranial nerve distribution especially with the third, fourth, sixth and seventh.

Twenty-five percent of cases will present difficulties in diagnosis.

Treatment largely management.

Discussants: E. O. Daniels, Marion; Clay Ball, Muncie.

3. MAURICE H. KREBS, Huntington.

Subject: Foreign Bodies Within the Respiratory Tract as Causative Factors in the Production of Pathological Conditions.

Abstract.—Undiagnosed and unsuspected presence of foreign bodies causative factors in croup; so-called pneumonia, bronchiectasis, abscess. Case reports. Simulating tuberculosis; case report. Classification of foreign bodies. Anatomical consideration. Symptoms. Early cases. Long standing cases. Historical notes. Exhibit of plates, prints, slides. Instrumentation. Conclusions.

Discussants: Alfred Henry, Indianapolis;
C. A. Sellers, Hartford City.

4. JANE KETCHAM, Indianapolis.

Subject: Eclampsia.

Abstract.—Eclampsia is one of the most important subjects confronting obstetricians at the present time. One reason is that the true nature of the disease is not known. Many theories as to its causation have been advanced and much learned as to its prevention, but the true nature is unknown. Theories are, toxemia from either bowels or kidneys; endocrine disturbance, or protein poisoning (Abderhalden). Prodromes, subjective and objective. Much was to be hoped from newer blood chemistry, nothing very satisfactory as yet. We cannot differentiate between true eclampsia and uremia of purely kidney origin. Prenatal care important. Use of sphygmomanometer and ophthalmoscope should be routine, as well as urine examinations. Urine examination should include comparison of output and intake, night and morning urine, and in doubtful cases a complete blood examination, urea creatinine, etc., should be done, not only for knowledge of individual case but looking to knowledge of future cases.

Discussants: F. R. Clapp, South Bend; Chas. S. Bond, Richmond.

5. CHAS. G. BEALL, Fort Wayne.

Subject: Functional Nervous Disturbances in Soldiers and Civilians.

Abstract.—Is there such a condition as a functional disease? Opinions past and present. Diagnosis must be based on present knowledge. Progress. Importance of subject from statistical standpoint. Older classifications. Modern classifications. Importance of establishing definite diagnosis. Pre-disposing causes. Danger of suggestion. Methods. Signs and symptoms. Treatment; moral; physical, and other methods.

Discussants: W. D. Asbury, Terre Haute; John H. Gilpin, Fort Wayne.

Friday, 9 A. M.

1. ARLIE R. BARNES, Rochester, Minn.

Subject: Bacteria Recovered Post-Mortem.

(No Abstract.)

Discussants: Virgil Moon, Indianapolis; Geo. W. McCaskey, Fort Wayne.

2. R. V. HOFFMAN, South Bend.

Subject: Some Problems in Syphilis.

Abstract.—Prevalence of syphilis. Wasserman test must be supported by clinical evidence. A brief, adequate routine examination. Status of serological tests. Predicted advances in treatment. Curability. To what degree is federal, or state, participation necessary.

Discussants: A. W. Brayton, Indianapolis; Wm. S. Ehrlich, Evansville.

3. JOHN W. SLUSS, Indianapolis.

Subject: Infections of the Gall Bladder.

Abstract.—Failure of present-day practice properly to estimate the importance of the liver in relation to deranged metabolism. Review of its functions and estimation of its products. Significance of urobilin and cholesterol. Relation between diet, cholesterol and lymphoid defense. Genesis of gall stones and the precedence of infection. The bacteriology of cholangitis and cholecystitis. "Biliousness".

The practical application of these observations is that it is imposed upon us to associate the idea of infective change in the bile passages, with functional derangement of the body at large; to reconstruct our notions of all that the old term "biliousness" connotes; to devise a more alert symptomatology and so anticipate and prevent serious surgical conditions.

Prophylaxis specially concerned with diet. Pregnancy and foci of infection. Character of early tissue change in cholangitis often escapes notice at operation and post mortem. The value of drainage, medical and surgical.

Discussants: W. D. Asbury, Terre Haute; W. C. Heilman, Newcastle.

4. GEORGE W. SPOHN, Elkhart.

Subject: The Physical Inequality of School Children.

Abstract.—The children of the rich, the middle class and the poor all attend the same school. Why the differences?

Parents desire their children as fit for school work as any in the schoolroom.

Infections, malnutrition and obstructions to normal physiological functions are physical defects.

Do the nurses who examine the school children favor any physicians or do they select the most efficient to do the corrective work?

Is the restless feeling of members of the profession due to private interests of a few in and out of the medical profession?

Discussants: Ada E. Schweitzer, Indianapolis; George W. Cring, Portland.

5. CHARLES S. WOODS, Indianapolis.

Subject: Professional Efficiency in the Hospital.

Abstract.—First: There is a very great difficulty in getting the attention of Board of Trustees to the importance of maintaining the highest professional standards in the institution. This is due to the fact that they rather consider that their task is to provide finances, equipment, and buildings. It is necessary to insist that the Board of Trustees is responsible for the professional care of the patient in the hospital.

Secondly: Laboratories (Clinical, X-Ray, and Dietetic). The institution must maintain well equipped and thoroughly manned laboratories. The attending physicians should use these laboratories because in many instances they cannot make a good diagnosis without their help. No institution can do good professional work that does not encourage thorough laboratory study of cases. The house physicians and interns should be guided entirely by the principle of service to the patient rather than advantage to themselves, or to attending men. The best intern is he who is most devoted to the care of the patient.

Thirdly: The surgeries, which are laboratories in which the surgeon carries out, according to well recognized technique, certain surgical principles, should be thoroughly equipped. The process of sterilization and the technique should be as nearly perfect as possible. Accidents such as infections and deaths from anesthetics must be reduced by the most rigid application of certain principles. Sterilization is often a matter of guess work. Incomplete sterilization as revealed by bacteriological cultures are rather common. The entire organization of the surgeries should be impressed with the very serious duty of preventing accidents of any kind. Anesthetics are generally badly given. Trained anesthetists should decide the important question of the kind and degree of anesthesia, also whether there is a hazard in connection with the administration of the anesthesia.

Fourthly: The nursing is of two kinds, professional and non-professional. The professional nursing should be thoroughly well done. Professional nursing means more than the mere care of the patient. It is really a part of the scientific management of the case. The training school, therefore, must be

fundamentally an educational institution, and if it is not that, obviously professional nursing of the highest type is likely to be only a matter of theory.

Fifthly: The institution must, in view of the above, determine who shall attend patients in it. There are those who seek to take from the authorities the privilege and obligation to do this.

Discussants: H. G. Hamer, Indianapolis;
A. C. Kimberlin, Indianapolis.

SECTION ON SURGERY

(ASSEMBLY HALL, EIGHTH FLOOR, CLAYPOOL HOTEL)

Thursday, 2 P. M.

1. H. K. BONN, Indianapolis.

Subject: Operative Injury of the Hepatic and Common Bile Ducts. Methods of Avoidance and Repair.

Abstract.—The types of cystic ducts. Anomalies of the hepatic ducts. Anomalies of the biliary blood vessels. The varying relationships of the hepatic duct and artery, the portal vein, and the common duct. Classification of operative duct injuries. Methods of repair. Methods of avoidance of duct injuries. General factors of safety.

Discussants: H. O. Shafer, Rochester.
Goethe Link, Indianapolis.

2. W. H. BAKER, South Bend.

M. W. LYON, JR., South Bend.

Subject: Cecal Tuberculosis. Slides.

Abstract.—The condition is usually treated in most works on surgery and pathology, but cases are comparatively rarely seen as judged by published reports. Condition often probably mistaken for true neoplasm. Gross appearance of a typical form. Microscopic comparisons in and about lesion. In reported cases the preoperative diagnosis is seldom stated. By the use of the microscope may the diagnosis be confirmed. Treatment is surgical. Immediate post-operative mortality is about 20 percent. Report of case with pre- and post-operative conditions.

Discussants: Vance A. Funk, Vincennes; J. H. Eberwein, Indianapolis.

3. M. N. HADLEY, Indianapolis.

Subject: Local Anesthesia as a Supplement to General Narcosis.

Abstract.—The use of local anesthesia in surgery should be regarded as a supplement to general narcosis. The limitations of its usefulness should be carefully studied and an attempt made to standardize its indications. Every surgeon should familiarize himself with the technique of local anesthesia so that when indicated it may be used successfully.

A drug to be used successfully as a local anesthetic must possess three qualities: it must be relatively non-toxic; it must be non-irritating to the tissues, and it must have anesthetizing properties sufficient to desensitize the tissues. Novocain meets all these requirements and is, when combined with adrenalin, an ideal local anesthetic.

The psychology of the surgeon who always has operated under general narcosis will undergo considerable alteration when he begins the use of local anesthesia. Blood vessels, nerves and the tissues of the body will have a new significance.

The greatest obstacle to successful local anesthesia is not in the ability to do a painless operation, but in the control of the psychic factors. All noxious mental stimuli must be excluded.

Discussants: A. C. Arnett; Lafayette; Frank Armstrong, Danville.

4. JAMES Y. WELBORN, Evansville.

Subject: Conclusions from My Experience in Appendicitis.

Abstract.—Report of a large number of cases occurring in the practice of Dr. Walker and myself. Classification according to age, suppurative conditions and end results. Various facts gained by personal experience.

Discussants: H. W. McDonald, Newcastle;
G. D. Scott, Sullivan.

5. A. S. JAEGER, Indianapolis.

Subject: Notes on the Treatment of Septic Infection Following Delivery or Abortion.

Abstract.—Successful treatment depends upon a careful study and correlation of certain diagnostic points, as follows: Past history, as to previous pelvic disease, gonorrhea, lues, malaria, etc. Is the present infection an acute flare-up of a chronic condition, or an acute primary infection? Patient's condition during pregnancy. *Status Praeens*: Focal infections; possible causative factors; time of appearance and type of symptoms. Local symptoms and general systemic reaction. Information gained from local examination. Need of careful laboratory co-operation in examination of local discharges, blood, urine, etc. If infection has passed the bounds of the uterus, and pelvic structures are involved, there is more or less progressive peritonitis and undoubted constitutional involvement. Any major local operation is of little avail, and is in fact dangerous. At most a careful removal of free material from the uterus, and if indicated some method of drainage, is all that should be done. The treatment must be constitutional.

When the infection is still local, then the uterus should be emptied of foreign material and thoroughly cleansed with Tr. Iodine solution. A curette should never be used. Drainage should be maintained when indicated by means of a fenestrated rubber tube well in the body of the womb, and frequent irrigations of alcohol, normal salt or hypertonic salt solution. Constitutional treatment should consist of proctoclysis of sodium bicarb, glucose and normal salt solution, before and after operative interference, anti-streptococcal serum if indicated, normal horse serum and heat of all human blood transfusion. Drugs such as sodium salicylate, quinine, etc., may be of value.

Patient should be placed in Fowler position as soon as possible to promote drainage. For peritoneal involvement opium in form of rectal suppository has proven best. Conservatism and individualism should be the keynote of all treatment, and the curette should never be used.

Discussants: Jos. H. Weinstein, Terre Haute;
Frank S. Holland, Bloomington.

Friday, 9 A. M.

1. P. E. McCOWN, Indianapolis.

Subject: Non-Tuberculous Infection of the Kidney. Slides.

Abstract.—The kidney as an excretory organ is of necessity affected by the general diseases of the body. Infections of the nose, throat, apical abscesses of the teeth, appendicitis and intestinal fermentation or any non-draining focalized infection give up bacteria and toxins which are at least partially eliminated through the renal tubules.

Pyelitis in pregnancy is usually easily recognized, but pyelitis in infancy is very commonly overlooked. This paper deals largely with the symptoms and diagnosis of this condition with the idea to stimulate an early recognition of the same.

It is accompanied by a series of radiographic lantern slides showing the various degrees and alterations of the kidney structure during the progress of this infection.

Discussants: Charles Barnett, Fort Wayne; Bernard Erdman, Indianapolis.

2. J. H. OLIVER, Indianapolis.

V. H. MOON, Indianapolis.

Subject: Osteitis Fibrosa and Osteitis Fibrosa Cystica.

Abstract.—Clinical history and pathology; general treatment and prognosis; report of three cases and history of one from practically the beginning to date, with skiagraphs every six months for six years showing trouble in the head and neck of the right femur, progressively involving the whole extent of the bone; and five years later beginning trouble in the upper end of the shaft and neck of the left femur.

Discussants: Chas. M. Mix, Muncie; Frank B. Wynn, Indianapolis.

3. STANLEY A. CLARK, South Bend.

Subject: The Treatment of Cancer of the Uterine Cervix.

Abstract.—Earnest consideration should be given to the question of operative versus radium treatment of carcinoma of the cervix uteri.

Examination of literature shows surgeons generally are much dissatisfied with the operative treatment, both as to immediate and ultimate results.

Radium treatment is apparently more desirable for palliation; and experience, for the brief period radium has been available, encourages its more extensive use with the hope of cures.

Discussants: Grace Line Homan, LaPorte; George Kohlstadt, Indianapolis.

4. W. D. GATCH, Indianapolis.

Subject: Some Notes on the Surgery of the Mandible. Slides.

Abstract.—Injuries, infections, and new growths considered.

In treatment of injuries, underlying principles are avoidance of antiseptics, thorough cleansing of wound, and radical conservatism.

When is a tooth infected? How much should be done when a tooth is pulled? Ill results of some recent practices.

New growths—a classification of the various forms involving the jaws; their diagnosis, prognosis, and treatment.

Discussants: W. R. Davidson, Evansville; J. C. Sexton, Rushville.

EYE, EAR, NOSE AND THROAT SECTION

(FLORENTINE ROOM, SECOND FLOOR, CLAYPOOL HOTEL)

Thursday, 2 P. M.

1. W. A. HOLLIS, Hartford City.

Chairman's Address: Some Professional Shortcomings.

2. C. NORMAN HOWARD, Warsaw.

Subject: Report of a Case of Bezold's Mastoiditis. Preceded by Thirty Years of Middle Ear Suppuration.

Abstract.—Brief review of Bezold's original article of 1881, describing this type of mastoiditis.

Frequency of its occurrence in more recent years.

Report of a case which followed thirty years of middle ear suppuration. Invasion of mastoid. Breaking through of inner plate of tip of mastoid into deep structures of the neck. Subjective mastoid symptoms almost entirely lacking. Patient came seeking relief from pain and swelling in neck. Findings at operation. Bacteriology. Result to date.

Discussant: E. J. Lent, South Bend.

3. J. N. STUCKY, Lexington, Ky.

Subject: Some Phases of the Trachoma Question.

(No abstract.)

Discussant: E. M. Shanklin, Hammond.

4. D. O. KEARBY, Indianapolis.

Subject: What the General Practitioner Can Do in Otology.

Abstract.—Acute otitis media and its complications. The need of recognizing clearly that a space of time exists between infection and complication, and this is the logical time for advice and treatment to secure perfect results.

The reason for the general practitioner's lack of enthusiasm for otology. Inadequate instruction in this and allied subjects during student and intern days. Indifference and neglect by the laity of all ear conditions except the most obvious and painful affections.

Our obligations as teachers of the public. A text should be a part of the public school curriculum.

Case reports and statistics of complications that might have been prevented had the patient been sufficiently educated to consult the physician early, that is, during the pre-complicated stage of the disease.

Discussant: George W. Spohn, Elkhart.

Election of Section Officers.

Friday, 9 A. M.

1. HARRY BOYD-SNEE, South Bend.

Subject: The Clinical Picture of Streptococci Osteomyelitis of the Temporal Bone.

Abstract.—The paper sets forth the pathological and bacteriological findings which support the diagnosis. Clinically the cases have been classed: (1) Diagnosis; acute, uncomplicated streptococci osteomyelitis of the temporal bone, manifesting clinically as acute, suppurative otitis media without variation. (2) Diagnosis; acute, complicated, suppurative streptococci osteomyelitis of the temporal bone; the symptomatology is variable and will coincide with whatever complication, single or multiple, which supervenes. Class 2 comprehends the regional complications, extracranial and intracranial, which develop by direct extension of the inflammatory process from the primary focus of infection in the temporal bone, and the remote complications which supervene through blood stream infection. This classification is based on clinical, pathological and bacteriological findings, further supplementary corroborative autopsy findings were available in 22 instances. The classical symptomatology of acute, suppurative mastoiditis is no guide in the diagnosis of this *atypical* phenomenon, *any* or *all* of the signs may be wanting in a case.

Discussant: O. C. Breitenbach, Columbus.

2. WM. F. MOLT, Indianapolis.

Subject: Ludwig's Angina, Complicating Acute Suppuration of the Parotid Gland.

Abstract.—This paper deals particularly with the necessity of early and free drainage; describing in detail the method of drainage for the different regions involved, and illustrated by a sketch diagram showing the exact region and glands involved, as well as the lines of incision for each.

Photographs are shown of the wound the fourth day after operation, together with the presentation of the patient, showing very slight scarring.

Discussant: D. F. Berry, Indianapolis.

REPORT OF THE SECRETARY

House of Delegates, Indiana State Medical Association:

Gentlemen: For the first eight months of the fiscal year 1921, I am very happy to report that the number of paid up members is now 2,571, which is in excess of the total membership for last year, and with the usual number who pay about the time of the annual session, expect to make a banner year for the Association. In another column in this issue of *THE JOURNAL*, as well as previous issues of this year, you will find a list of the counties that have made the best showing, namely, those who have increased their membership ten percent or better over last year.

The secretary of the American Medical Association has notified us that Dr. G. W. H. Kemper by reason of his long time membership in the American Medical Association is eligible to be made an Affiliate Fellow by action of the House of Delegates at the annual session at St. Louis, May, 1922. The only qualification required is that the Indiana State Medical Association elect Dr. Kemper to honorary membership. Since Dr. Kemper is not now an active member of this Association, he can be made an honorary member in accordance with Section 5, Article IV of the constitution when so elected by this House of Delegates. The high esteem in which we all hold Dr. Kemper makes it unnecessary for the secretary to urge any action, as even this would be very slight recognition of the years of service which he rendered us.

The secretary wishes again to remind the House of Delegates to exercise care in electing the officers of this Association. Members should not be elected to positions of trust who are not able and willing to discharge their obligations. A recent instance is the fact that a delegate to the American Medical Association, elected for two years, did not attend either of the two sessions.

The secretary was interested in looking up how many of the present county secretaries have been serving continuously during the past twelve years of his incumbency, and finds that only three are still remaining: Dr. G. D. Miller of Logansport, Dr. W. T. Lawson of Danville and Dr. Allen Pierson of Spencer. Dr. W. R. Quick of Delphi was secretary all of that time except the year 1920. Of these secretaries who have worked so continuously and faithfully in maintaining their organization, the palm must certainly be awarded to Dr. Allen Pierson, who has been secretary continuously of the Owen County Medical Society for the past forty years, beginning in 1882. I venture to predict that this is a record of service that will hardly be equaled by any other secretary, and is a distinction of which Dr. Pierson has reason to be proud. Without the labors of the county secretaries who work year in and year out devoid of compensation, this organization could not grow as it has, nor would it be possible to perpetuate it.

Respectfully submitted,

CHARLES N. COMBS, Secretary.

REPORT OF THE COMMITTEE ON ADMINISTRATION AND MEDICAL DEFENSE, INCLUDING THE REPORT OF THE TREASURER

House of Delegates, Indiana State Medical Association:

Gentlemen: Due to the fact that our former executive secretary, Mr. Frederick E. Schortemeier, resigned the first of this year as attorney for the Medical Defense Fund, the details of administration and

medical defense were taken care of by the secretary-treasurer.

When I assumed these duties, I discovered that the records of the Medical Defense Committee were somewhat scattered and not kept in a manner to be readily accessible to future officers. I, therefore, searched for all existing records, finding some of them in the office of Mr. Cavins, some in the office of Mr. Henderson, and some were stored in the warehouse from the executive secretary's office. Assembling these, I arranged them in chronological order, giving each one a serial number to be used in making reports so that the names of the doctors would not appear in the printed transactions. I have read over every letter and every report printed in *THE JOURNAL* and otherwise since the establishment of this feature in 1912, and made a tabulation of each case in a record book so that the data could easily be accessible. Each page contains the serial number, the doctor applying for defense, address, county membership, the original application blanks, the nature of the case, the date on which the services were rendered, and the date on which the member paid his dues for each year beginning with 1911, a short history of the progress of the case and the settlement, if closed, an itemization of each check paid for that case and the name of the attorney and whether other insurance was carried. This means any officer in the Association can in a very short time review the history of the Medical Defense feature and know exactly the results and the expense incurred.

A criticism was received some time ago that this Association had defended doctors who were not members at the time services were rendered, and I have been interested in going over these records to find whether or not this has been so, and find it to be true in only one instance which was in 1914 when a delinquent member was defended at a cost of \$30.00. This small sum represents the only amount that was ever expended for a member not deserving defense. The two specific cases alluded to in this criticism were, first, one member who was in good standing and was entitled to defense; second, a member who received no assistance from this Association, and therefore, no money was expended.

The report one year ago showed twenty-six cases pending, and the status of these cases on this date is as follows: Nos. 69, 72, 74, 76, 79, 80, 82, 84, 88, 89, 91 and 95 dismissed at no cost to the Association. No. 4 closed. Verdict for defendant. No expense. No. 62 compromised out of court. No expense. No. 71 dismissed. Cost \$100.00. No. 73, verdict for plaintiff. Cost \$250.00. Application for new trial. No. 75 compromised. No cost to Association. No. 81 dismissed. Cost \$37.00. No. 87 dismissed. Cost \$300.00. No. 90, verdict for defendant. Cost \$240.00. No. 93, criminal case, not eligible for defense. Nos. 67, 83, 85 and 94 still pending, and No. 68 pending before the appellate court. New cases received from September 1, 1920, to September 1, 1921, eleven, Nos. 96 to 106, inclusive. Of these, three already have been closed: No. 97, verdict for defendant. Cost \$500.00. No. 101 not defended, as member was delinquent at the time services were rendered. No. 104 compromised out of court. Four old cases have been reopened for new trial, making a total of seventeen cases now pending (namely, Nos. 67, 68, 73, 83, 85, 86, 90, 92, 94, 96, 98, 99, 100, 102, 103, 105, 106).

This is considerable reduction over the report of last year, and still the expense has been within the income allotted. We have had no attorney on salary, and all the money expended has gone to local attorneys employed by the members defended.

FINANCIAL REPORT

Medical Defense Fund.

Receipts:

Balance on hand at last published report.

January 1, 1921, Cash.....\$1,526.21

Liberty Bonds..... 5,000.00

Nothing received from the General Fund on account of the amount on hand being over six thousand dollars.

Total\$6,526.21

Disbursements:

Printing\$ 22.30

Case No. 73..... 250.00

Case No. 90..... 240.00

Case No. 96..... 59.00

Case No. 97..... 500.00

Total\$1,062.30

Balance on hand Sept. 1, 1921, Cash.....\$ 463.91

Liberty Bonds..... 5,000.00

These bonds are Fourth Loan at 4¼% interest and do not mature until October 15, 1938. This presents a possibility of the Association losing money in case it had to sell these bonds to carry on the medical defense. However, the estimated income at 2,600 members is \$1,950.00, and the interest on the bonds is \$212.50, making the estimated receipts for next year \$2,162.50. The maximum cost to the Association for any one year was in 1917 of \$1,843.24, so that I do not think it will be necessary to sell the bonds before maturity. The cash on hand plus the interest which will be received in October will give us a sufficient balance for this year.

The report of the treasurer is as follows:

Receipts:

Balance at last printed report,

January 1, 1921.....\$ 7,028.40

Membership dues 2,571 members..... 10,280.00

(One in service, dues remitted)

Total\$17,308.40

Expenditures:

THE JOURNAL, \$2 per member..\$5,142.00

Secretary's stenographer..... 495.00

(At \$16.50 per week)

Postage and incidentals..... 73.68

Printing 255.25

Councilors' expenses..... 29.41

Legislative Committee..... 948.89

Storage of furniture..... 38.50

Total\$6,982.73

Balance on hand Sept. 1, 1921.....\$10,325.67

Respectfully submitted,

CHARLES N. COMBS, Treasurer.

E. M. SHANKLIN, Chairman,

GEORGE R. DANIELS,

FRANK B. WYNN.

REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION

House of Delegates, Indiana State Medical Association:

Gentlemen: The activities of the Committee on Public Policy and Legislation are pretty well covered in an editorial in the April number of the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION based upon data furnished by the Chairman of your Committee. At the last annual meeting of the Indiana State Medical Association the House of Delegates endorsed recommendations made by the Committee

on Public Policy and Legislation, which recommendations were embodied in a bill introduced during the recent session of the Indiana Legislature and known as House Bill No. 267. The Bill, as presented, contains but two points of special interest, one the requirement of the annual registration, and a fee of \$2.00 which is made necessary by the fact that our present law does not require annual registration and consequently no correct or up-to-date record can be kept of the physicians in the state of Indiana who have been licensed. Many have died, others have moved away, a large number are superannuated and no longer in practice, and without an annual registration, enforcement of the law is difficult and often impossible, and no current list of physicians in Indiana is obtainable. No such constructive work in legislation is possible without such a list as would be possible with it. The small sum of \$2.00 for annual registration is a pittance compared with the large sum which the enemies of medical legislation annually contribute to secure the passage of state medical laws and to break down our present laws. It is a matter of congratulation that our Association has endorsed the principle of annual registration, and an annual fee for registration even though the amount is very small. Five other states now have annual registration in one form or another and it is urgently needed in Indiana. Unfortunately, owing to the illness of the chairman of your committee during the first half of the legislature, there were no active efforts made to promote House Bill No. 267 until the session was too far advanced to secure its passage. It passed the Lower House and was sent up to the Senate, and but for the rush of bills in the last few days of the legislature, it probably would have been passed and become a law. It was recommended that the same bill be introduced at the next session of the legislature, and the earnest cooperation of all members of the Indiana State Medical Association is solicited to secure its passage.

No just complaint can be made of the failure in the enforcement of the present law in the absence of an annual registration requirement and the fund raised thereby for the enforcement of the law. There is no merit in the argument that the state requires doctors to be licensed and therefore should furnish money out of the state treasury for enforcing the law. The state does require every man who practices medicine legitimately to be licensed and to have certain definite qualifications, and the state has done this because the medical profession asked it to, and our present law is a creature of our own conceptions and desires. It should receive our further support in a united effort to secure annual registration and the cordial payment of the small pittance annually suggested.

Second: The bill provided for the addition of the words "the healing art" in the definition of the practice of medicine to cover all forms of treatment where medicine is not administered.

It seems again necessary to call attention to the fact that all medical laws under our form of government are classified as police regulations and consequently their enforcement is left in the hands of the county authorities, and unless the different county societies will make continued and earnest efforts to secure the right kind of enforcement of the law, regardless of politics, and then give every possible aid to the prosecutor in securing evidence that will obtain conviction, the present law or any other law regulating the practice of medicine will become impotent. Police regulations require enforcement by local authority. If your automobile is stolen you do not appeal to the attorney general for help but to your local authorities. The principle and practice are the same in the enforcement of medical law.

Attention is called especially to the action of the Washington County Medical Society and to the resolutions adopted by it and published in the April, 1921, edition of the *JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION*. These resolutions are addressed to the public and are of such importance and so pertinent to the present situation in Indiana that we take the liberty of embodying herein part of the resolutions and to recommend similar action to other societies:

"Since the day that Eve yielded to the blandishments of the devil, to the present time, men have been misled by alluring promises and brazen falsehoods, and have parted from their most precious possessions with little chance of ever recovering them.

"We feel it our duty to protect you from the follies and dangers of all fakers and confidence men who profess to deal in special and miraculous cures.

"To this end we feel that we should apply the surgeon's knife; and we hereby announce that since it is your privilege to employ whomsoever you please to relieve your distress when you are ill, we also reserve the privilege of waiting upon you only insofar and for so long as you may accept our advice.

"And we wish to advise those who are believers in and boosters for chiropractics, that from and after this date we shall expect you to call upon the chiropractor for all your ailments, or for none; and that hereafter when the chiropractor has a case that is going to die we will refuse to assume any responsibility in the case, and that we will not sign the death certificate for the chiropractor as has been done in the past.

"We do not want your business and shall most certainly be too busy to look after you.

"MEMBERS WASHINGTON COUNTY
MEDICAL ASSOCIATION."

Special thanks are due to Representative Kingsbury, who was the sponsor for House Bill No. 267, and to Drs. DeLong, Phillips and Boner, who are members of the Lower House, and to Representative Harrison and to Senator VanOrman, and others, for the cordial support they gave to the efforts of your committee. Special attention is also called to the list of those who voted for the Bill, and very particular attention to those who voted against it, as shown by the list published in the *JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION* for April, 1921.

Respectfully submitted,

WM. N. WISHARD,
Chairman Committee on Public
Policy and Legislation.

REPORT OF COMMITTEE ON MEDICAL EDUCATION

House of Delegates, Indiana State Medical Association:

Gentlemen: In previous decades medical education as a problem has interested state medical societies very little, and whatever attention this subject may have aroused could have been associated with no sense of responsibility. Medical education in America was then a private function and concerned itself chiefly with the training of undergraduate students. Some physicians visited Europe, and more the medical centers of this country, and undertook what was popularly called "postgraduate work". Postgraduate work in the university sense, in America at least, this was not, since its grade was uniformly below the level of the undergraduate courses of the better medical schools. But designate these courses by whatever name you will, many such postgraduate schools deserve great credit for helping so

many doctors to catch up, in some degree at least, with the medical advance made since they received their degrees.

With the general improvement in the average level of medical practice, and the specialization which of necessity has followed the rapid widening of the medical field, it has become common for two or more men interested in and trained in different aspects of practice to enter into some form of partnership, or, what is of more importance, for men well established in practice to associate with themselves recent graduates trained in the ever multiplying more scientific methods of diagnosis. Such associations cannot but stimulate the busy practitioner to continue his medical study. Of even greater importance is the rapid development of laboratory practice which makes its direct appeal to the public as well as to the profession. The result is that each practitioner of medicine feels more strongly than ever the necessity of keeping abreast of the times.

During the past forty years, and in part as a result of the development of preventive medicine, the growing consciousness on the part of the laity that they have a very personal interest in the quality of medical practice has resulted in definite legislation intended to improve the quality of available professional aid. State universities have had medical schools almost thrust upon them, and are now practically asked to see how good doctors they can graduate. With medical education a state function, with the power to license doctors also a state function, and with plenty of popular education, and more accurate each year, spread abroad, as to what are the marks of a good doctor, a state medical society cannot but organize itself with a view to obtaining for its members opportunities for education which are convenient and efficient. The opportunities for such postgraduate work have in the past not been many. The few could go to a distance, at great expense, but not so the many, and yet that state, the population of which virtually demands such study of its practitioners, should provide opportunity for not the exceptional but the average man. Postgraduate medical departments of universities, of which so much is heard today, will never be able to meet this problem since their advanced courses of from one to three years are more intended for the recent graduate who desires to pursue his education further before he begins his practice rather than to the man who in busy practice can afford but from three to six weeks each second or third year.

How then can such courses for practitioners be provided? Certainly the state universities should be as able as they are willing to carry the major part of this problem. Every physician in a given state should feel that he has the right to call on his state medical school for any assistance, information, or instruction he desires. Does he need materials for his laboratory? That should be obtainable from the university at cost price. Does he need advice or information concerning any test? That should be easy for him to get. Does he desire training in any department for one day, one week, one year? Then he should be able to get that, when he wants it, and at a reasonable price.

Good health of its citizens is one of the greatest assets a state can have; then good doctors are one of the state's greatest assets, and states should vie with each other in their efforts to have them. This means also that one of the first aims of a state medical society should be the continued education of its members whose medical study must continue as long as the practice. This means further that the state medical society and the state university should in

the future work out together many educational problems of mutual interest. True, no state university at present is doing its full part in such a program, but it is no rash prophecy that before long several will have made considerable progress in that direction. Why may not Indiana, always a pioneer, lead in the movement?

But what can be done today? This past summer at the Medical Department of our University thirty-five doctors attended for six weeks special courses in pathology, biochemistry, medicine and surgery. We could have cared for a much larger number in many more courses. Should groups of doctors desire special courses at other seasons than during the summer, these certainly could be arranged, granting that groups of sufficient size (of perhaps six) could be formed. A few doctors singly each year do join the senior class for a few weeks. The possibilities of such work have not yet been determined.

Several Indiana county medical societies have invited the University to send them traveling clinics—that is, groups of doctors who will conduct clinics at their county seats. Already this experiment is being made in New York State, and a somewhat similar plan has met with considerable success at Dayton, Ohio. In many ways this is, from the university's point of view, not as practical a scheme (except in the case of counties near the university) as are special courses at the medical school, for the reason that a university course in any one subject should, to have definite educational value, consist of at least eighteen hours (a minimum generally agreed upon). Briefer demonstrations than this could well form part of the program of the county and district medical societies, the educational possibilities of which are being developed less, if anything, rather than more than formerly. In this work the medical faculty would be glad to cooperate.

Each state university should have a medical library from which books could be sent on request to any doctor in the state. The very little use made of the Indiana Medical School Library by physicians has often aroused our wonder. In this connection we would invite the members of the State Medical Association to collect for this library all books published by Indiana men, and copies of old files of the various medical journals which have been published in this section of the country, for this library should have the most complete set of such journals there is in this country.

Respectfully submitted,

CHARLES P. EMERSON, Chairman.

REPORT OF COMMITTEE ON INDUSTRIAL AND CIVIC RELATIONS

House of Delegates, Indiana State Medical Association:

Gentlemen: No matter of sufficient importance to chronicle in an annual report has been referred to the Committee on Industrial and Civic Relations, nor have there been any questions arise which indicated that the Committee should assume the initiative for the Association. For this reason there has been no formal meeting of the Committee.

In the State of Indiana the matter of Compulsory Health Insurance and of State Medicine has not yet intruded itself with such vigor that the profession has been brought into direct combat with the issue, but that this issue will surely arise one cannot doubt. The Legislature of 1921 did not amend the State Industrial Act in any manner which modifies the relation of the medical profession to that act.

A recent decision of the Indiana Appellate Court in the case of *The National Car Coupler Co. et al. vs. Sullivan* is of interest as it withholds from the In-

dustrial Board certain functions which the Board, prior to this decision, assumed. In this case Dr. Sullivan was employed by the National Car Coupler Co. to attend an injured employee. This service was rendered and a bill of several hundred dollars was submitted to the National Car Coupler Co. The bill the company refused to pay, and action before the Industrial Board was instituted by Dr. Sullivan. The Board, after hearing the evidence in the case, held that the bill was just and reasonable and ordered the Car Coupler Co. to pay. The National Car Coupler Co. declined to pay and appealed to the Appellate Court.

The Appellate Court decided that the Industrial Act of the State of Indiana "does not enlarge the authority of the Board with reference to the approval of fees beyond that provided in Section 25 in case of an emergency caused by the employer's failure to provide medical care, and the Board has no jurisdiction to pass upon the fees of a physician employed by employer".

With this decision the fee bill approved several years ago by the Industrial Board passed into desuetude, and the Board no longer decides upon fees other than those for services rendered by some physician in case of an emergency and not employed by the employer of the injured party.

Respectfully submitted,

NORMAN E. JOBES, Chairman

REPORT OF COMMITTEE ON HEALTH PROBLEMS IN EDUCATION

House of Delegates, Indiana State Medical Association:

Gentlemen: Due to the death of Dr. W. D. Hoskins, the chairman of this Committee, no special report has been prepared except the following which was prepared for and presented before the Committee on Health Problems in Education at the Boston session of the A. M. A.

As chairman of a committee on Health Problems in Education, of the American Medical Association, representing the Indiana State Medical Association jointly with the State Teachers' Association, I beg to submit the following report on Health Problems in Education.

So many things affect the health of the school child that it is difficult to present a brief report.

The approval of plans for school buildings and certain equipment rests with the State Board of Health. The State Department of Public Instruction "is in hearty sympathy with every effort of every organization in Indiana devoted to the betterment of the health of school children and of all other people". They impress constantly on the minds of school officials that conditions in and about school buildings must be sanitary in every way. They cooperate with the State Board of Health along these lines.

During the last ten years, the tendency has been toward the consolidated type of school. Many fine new rural buildings equipped with modern conveniences have been erected within the last ten years. One can almost tell the date of erection by the type of building and equipment. Many of the recent ones have steam heat and flush toilets, either periodic automatic or individual. Gas engines are used to pump the water under pressure. Delco electric lighting is provided. Nearly all schools are provided with some domestic science equipment as Home Economics is a part of the curriculum. Pianos or Victrolas provide music for marching and physical education exercises. Playgrounds are usually ample for contest games and in many places playground equipment has been provided. There are rulings governing the type

of school conveyances. The motor driven cars are used where roads are good.

We have on the statute books of our state a law that permits the employing of school physicians, which is compulsory only during epidemics. Unfortunately, not many school officials take advantage of this statute, especially in the rural districts. We are hoping that this law may be made compulsory eventually, so that every child in the schools of this state may be under the observation of a competent physician, not only during times of epidemics but at all other times. During epidemics, local authorities are often aided by the State Board of Health Epidemiological Department, and Laboratory. An official is sent to any locality and assists with the inspection of children in locating carrier cases. Needed supplies are furnished and bacteriological examinations are made by the State Board of Health.

The State Department of Public Instruction is greatly in favor of detecting mental and physical defects in children and having these defects remedied if possible. A few of our schools are undertaking to conduct special classes for defective children. This work has not yet assumed very large proportions in Indiana, but we are hoping that it will develop and eventually meet fully the needs of our school system. In a few schools, research workers from colleges have conducted intelligence tests.

Indianapolis hospitals and town and county hospitals are doing capacity work for defective children. Institutions for feeble minded children have a long waiting list. The State Tuberculosis Sanatorium gives infected children special care and has provided the Fresh Air School in connection with the sanatorium. Similar attention is given by institutions of this nature at Fort Wayne, South Bend and Indianapolis. Fresh Air Schools are conducted in many localities and school lunches have been instituted to improve the condition of poorly nourished children. There is a widening conviction that where children are compelled to eat lunches in the schoolhouse, these lunches should be served in the most attractive way. There is also a movement in some cities for conducting special milk clinics where children undernourished may be given hot milk and perhaps some other food at special hours during the day in order to build up their constitutions. The nutrition work in Fayette and Huntington counties was begun eight years ago, and has attracted wide attention as other counties have fallen into line. The Department of Home Economics at our State University and State Agricultural College both through special agents and extension workers, have been responsible for the rapid development of this work in the last five years. Home Demonstration Agents, School Nurses, Parent-Teachers' Associations, Federated Club Health Committees, Sororities (notably the Tri-Kappas), Chambers of Commerce, Rotary and many other organizations have assisted. The type of lunch is adapted to the needs in the particular school undertaking this project. Additional interest has been aroused by the Home Demonstration Agents' cooperative work with the United States Department of Agriculture. Clubs of Women throughout counties have been formed and have been given instruction in food values and preparation. Girls' Clubs are taught methods of caring for various food products. The teaching of Home Economics has greatly aided this work, as the Home Economics Classes usually assist with the School Lunches.

The State Board of Education some months ago authorized the employment of school nurses as teachers of hygiene where the nurses are High School graduates, are registered, and are able to pass an examination in hygiene provided by the State Board

of Education. Unfortunately some of the earlier graduates had not completed High School education and consequently were not eligible under this rule. It is not possible for the State Board to waive a high school training, since the regulation for employing nurses is based on the teachers' license law. Community and county nurses are employed by various agencies. Practically all nurses do more or less health work in the schools, except in the large towns where special school nurses are provided. Dentists are cooperating in this work as well as doctors, and are devoting much time to the correction of defects. One county has a nurse who is also school attendance officer, and executive of the Board of Children's Guardians. She not only inspects school children and refers them to school physicians, but when an ignorant parent refuses to have some needed correction made for a child, she has the child made a ward of the court and proceeds to give the needed assistance. She provides funds by having Child Welfare Associations sell tickets to moving picture shows, etc. All the children thus help the needy ones. Glasses have been fitted, tonsils and adenoids have been removed, post-infantile-paralysis cases cared for, poorly nourished children furnished with milk, etc. Deserting fathers are brought into court by her and compelled to contribute to the support of children. Mothers are given legal custody of their children and are paid for their care instead of having homes broken up. All these things are possible under Indiana laws, but often cooperative effort is lacking.

At least one thousand examinations of school children were made on request by the State Division of Child Hygiene, with the purpose of showing the need of the work in communities that were trying to establish health inspection in the schools. Great impetus has been given to local work owing to the fact that many child hygiene conferences have been held throughout the state, often in school buildings, and children from the schools have been referred for examination along with the examinations of the pre-school child. It is the purpose of this Division to encourage each year the examination of all children who are to start to school for the first time, and the correction of defects so that the child may present a clean bill of health upon entering school. The community organization for Health Conferences held by the Child Hygiene Division will be effective for future work.

An aid to the maintenance of the health of the school child is found in physical education. The physical training law on our statute books applies only to cities of 5,000 or over in population, and does not provide sufficient funds for administration. For this reason it has not been declared effective. However, the physical training movement has been growing. Most of the cities in Indiana, and many consolidated school districts, are giving it special attention. In many counties, paid community workers are popularizing physical education and playground work. Equipment is provided usually by the township trustees but is often furnished in other ways. The trustee is also responsible for needed supplies for indigent families, including food, suitable clothes and books for school children, and in many places township funds are used to assist in the correction of defects found by the school inspectors.

Funds for a Riley Memorial Hospital for children were provided by the last legislature. This will fill a long felt need by providing a place where children may be kept under observation where diagnosis is difficult, and will relieve the congestion in our general hospitals.

Our State Universities and Colleges through their extension work are all contributing to the solving

of the health problems in our schools. The State Board of Health, the State Department of Education, the State Board of Charities, Industrial Commission, the Highway Commission, and other departments are contributing indirectly or directly to the same end.

Child Welfare Associations, Parent-Teachers' Associations, Children's Aid, Sororities, Farmers' Federations, Commercial Organizations, Rotary Clubs, and Fraternal Organizations are working on special phases of this problem. The sentiment they are creating will be invaluable in the securing of a well organized State Department for carrying on this work. In presenting this report, my chief regret is that it is impossible to give individual credit for many projects that are worthy of more extended notice.

Respectfully submitted, ADA E. SCHWEITZER.

REPORT OF THE COMMITTEE ON HOSPITAL STANDARDIZATION

House of Delegates, Indiana State Medical Association:

Gentlemen: There has been no systematic inspection of hospitals this year. It was not deemed necessary after the general state investigation in 1919 and 1920.

Your chairman has asked for information from the Committee on Education and Hospitals of the A. M. A. relative to changes in standing of any hospitals in the state, by reason of individual improvements, which would warrant better classification. No definite reply has been forthcoming, but we believe several hospitals in the state have been accorded advanced standing.

It is evident that some confusion exists upon this question, as some institutions have been rated differently by the Committee of the A. M. A. and that of the College of Surgeons. Your State Association Committee has communicated, officially, only with the National Organization.

Respectfully submitted,

ALBERT E. STERNE, Chairman.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

House of Delegates, Indiana State Medical Association:

Gentlemen: The scientific program prepared for this session of the Association constitutes the report of your Committee on Scientific Work.

Respectfully submitted,

C. E. COTTINGHAM, Chairman.

REPORT OF COMMITTEE ON SCIENTIFIC EXHIBIT

House of Delegates, Indiana State Medical Association:

Gentlemen: The Indiana University School of Medicine has taken over the Scientific Exhibit for this session, and the display promises to be of unusual interest.

Respectfully submitted,

MILES F. PORTER, JR., Chairman.

REPORT OF THE COMMITTEE ON NECROLOGY

House of Delegates, Indiana State Medical Association:

Gentlemen: During the year ending Aug. 1, 1921, the state lost by death 100 physicians, a mortality rate of 22.4 percent, nearly 8 percent greater than the general mortality rate.

I herewith present a graphic chart showing the causes of death in the various decades.

	Various Ages								
Causes of Death	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100	% of Total	
Apoplexy and Paralysis		5	5	7	3			20%	
Heart Disease			1	4	4			9%	
Kidney Disease		1	3	1	3			8%	
Arteriosclerosis			2	1	1	4		8%	
Pneumonia	1	1	1		3			6%	
Carcinoma		1		3				4%	
Pulmonary Tuberc.		1	1	1				3%	
Diabetes Mel.			1	1				2%	
Typhoid Fever		1	1					2%	
Accidental Injuries		1		1				2%	
Suicide		1	1					2%	
Appendicitis		1		1				2%	
Encephalitis			1					1%	
Gangrene		1						1%	
Dysentery							1	1%	
Septic Infection	1							1%	
Acute Indigestion					1			1%	
Unclassified		3	8	5	7	3	1	27%	
TOTALS	2	17	25	25	22	7	2	100%	

You may wonder at the percentum of the unclassified group, but I assure you that in each instance I wrote to the County Secretary, a relative or friend of the deceased, sometimes to all three, and received no reply. Early in the year I sent self addressed stamped envelopes when asking for this information, but the results were so unsatisfactory that after May 1st I sent my requests on a postcard.

If the County Secretaries could realize that this information is for the benefit of the Association as a whole, and not a personal favor to the Committee on Necrology, perhaps we could get better cooperation.

Respectfully submitted,

H. D. FAIR, Muncie.

REPORT OF COMMITTEE ON ARRANGEMENTS

House of Delegates, Indiana State Medical Association:

Gentlemen: The session will open with the annual smoker and get-together meeting at eight o'clock Wednesday evening in the Assembly Hall on the eighth floor of the Claypool Hotel. An interesting program has been provided, perhaps not too serious in nature, but of such character to make one forget his usual self and enjoy the lighter moments for an hour or so.

On Thursday noon the Indiana University School of Medicine will serve a luncheon at the University Building—West Michigan street—at 12:30. Transportation will be furnished to and from the luncheon. Complete information concerning this affair will be furnished by a representative of the School who will be in attendance during Wednesday afternoon and Thursday forenoon.

The outstanding event of the meeting is the annual dinner to be held Thursday evening at six o'clock in the Riley Room of the Claypool Hotel. Surgeon General of the Army, Merritt W. Ireland, will be the guest and speaker of the evening. His name alone assures a delightful and profitable evening, aside from all other features of the program.

A special committee, with Mrs. C. H. McCaskey as Chairman, has planned a program of entertainment for the visiting ladies during the entire session. Seats at the Circle Theatre will be provided, and an invitation is extended to all the ladies to a tea to be given at Dr. Ross' country place.

The medical profession of Indianapolis has arranged a series of clinics to be conducted by members of the Indianapolis Medical Society, and held on Wednesday afternoon, September 28, at the Robert W. Long Hospital, Indianapolis City Hospital, Methodist Hospital and St. Vincent's Hospital. Doctors desiring to attend these clinics should send their names to this Committee so that proper provision can be made for all.

The local medical society and the citizens of Indianapolis extend a cordial welcome to all visiting doctors and their wives and friends.

Respectfully submitted,

C. H. McCaskey, Chairman.

ANTIVIVISECTIONISTS' ATTEMPT SUPPRESSION OF TRUTH

Mr. Baynes' excellent article, "The Truth About Vivisection" in the July *Woman's Home Companion* has evidently proved a body blow to the professional antivivisection agitators. This article, which has already been commented on*, is written by one of the leading naturalists and animal lovers in the country. After long, painstaking, and impartial investigation he found, not only that there is no basis for the claims on which the antivivisectionists base their case, but also—and far more important, since it shows the mental and moral caliber of the agitators—that their literature is a tissue of misrepresentations and of garbled and obsolete authorities. Physicians have long known this. In the hearing on the Meyers Dog Bill (S. 1258) before the Senate Judiciary Committee, the advocates of the bill quoted, without any reservation, a statement of Dr. Henry J. Bigelow as the opinion of "one of the greatest surgeons in the United States". Yet Dr. Cannon showed that Bigelow was born over 100 years ago, that he made the statement quoted in 1871, that thirty years later he made another and entirely different statement endorsing animal experiments, that this fact was publicly called to the attention of the antivivisectionists at a Congressional hearing eleven years ago and that they were still using the original and misleading quotation. Mr. Baynes found many similar instances. One Dr. John Elliotson is quoted as a physician "of the highest intelligence". Mr. Baynes found that he was a mesmerist who was born 130 years ago. He also found that the whole case of the antivivisectionists is without any sound basis of fact. Mr. Baynes, as the author of the article, and Miss Gertrude B. Lane, editor of the *Woman's Home Companion*, are now naturally subject to all the invective and misrepresentation which the antivivisectionists can command. The following circular letter, sent out by the New York Antivivisection Society over the signature of Diana Belais, shows the fair-mindedness and sweet reasonableness characteristic of this organization:

To All Friends of Animals:—One of the most reprehensible and misleading attacks upon our literature has its place in the July *Woman's Home Companion*, written by one Ernest Harold Baynes, who claims to be a humanitarian, going about the country lecturing to Humane Societies against cruelty to animals, yet at the last moment of his address delivering a strong defense of the most cruel practice in the world—vivisection. (I have been informed that he has done this without warning to the Society employing him.)

Permission has been asked by me to answer his glaring misrepresentations, but appearances indicate there is a general scheme afoot to spread vivisectional teachings broadcast through those magazines appealing especially to women.

In the meantime, please write to the *Woman's Home Companion*, 381 Fourth Avenue, New York City, excoriating this nonsensical article—full of perversions—that defends vivisection, and I sincerely hope you may follow my example by telling the editors that not only have you bought your last number, but that you will enter upon a personal campaign to urge others to withdraw all support in future.

I do not ask this of you on solely sentimental grounds, but because we must unmistakably show those who holdily and flagrantly misrepresent our literature that our united strength is something to be reckoned with.

Act at once!

Do not forget that vivisectionists have admitted that our "Medical Opinion" booklet has done them a lot of harm—hence these repeated attempts to undermine it and our other work built up with so much care.

Faithfully yours,

DIANA BELAIS, President.

Comment is unnecessary. It is also superfluous in view of the admirable editorial of the Boston *Herald* for Aug. 25, 1921, which says:

The New York Anti-Vivisection Society is making a serious mistake in trying to boycott the *Woman's Home Companion* because it recently printed an article by Ernest Harold Baynes, the well known nature lover and humanitarian, on the "Truth About Vivisection." Are the antis unwilling that people should hear the other side? Apparently their president has sent a letter to the faithful in which he asks them all to write to the magazine, excoriating the article, and he further expresses his hope that they will follow his example by telling the editor that they have bought their last copy of it, and they will enter into a personal campaign to urge others to withdraw all support in future. It is not by suppression of intelligent discussion that any cause really derives aid. If the cause of the antis, in this instance, is so bad that they dread the presentation of the other side, it must be even weaker than we supposed.

The attempted boycott of the antivivisection agitators against Mr. Baynes, Miss Lane, and the *Woman's Home Companion* will naturally have little effect that was not anticipated. Every fair-minded person must recognize the value of such an unbiased summary of the problem as Mr. Baynes has presented. A public service of great value has been rendered by the author of the article, the editor and the periodical which have had the courage to publish the facts in the face of such an unprincipled opposition as was realized would be encountered.—*Jour. A. M. A.*, Sept. 3, 1921.

**J. A. M. A.*, Aug. 6, 1921, p. 469.

**THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION**

Devoted to the Interests of the Medical Profession of Indiana

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SEPTEMBER 15, 1921

EDITORIALS

OUR PRESIDENT

David Ross, President of the Indiana State Medical Association, 1920-21, was born in Indianapolis, Indiana, November 20, 1865. His early life was spent on the farm and in teaching school. He received his B.S. degree from the Central Normal College, Danville, Indiana, in 1891, shortly thereafter taking up the study of medicine at the Medical College of Indiana, from which he graduated in 1895. During the years of 1905 and 1906 he served as interne at the Indianapolis City Hospital, and since that time has practiced medicine continuously in the city of Indianapolis.

On September 24, 1901, Dr. Ross was married to Miss Gertrude Goodhart, of Indianapolis. They have one son, Andrew Franklin Ross, now 15 years of age.

Since his graduation in 1895, Dr. Ross has been instructor in the Medical College of Indiana and its successor, the Indiana University School of Medicine, in which institution he now holds the chair of Associate Professor of Surgery. He served as president of the Indianapolis Medical Society in the year 1915, and for many years has been active in medical society work, not only in his local society but in the state and national organizations.

The Indiana State Medical Association has not only honored Dr. Ross in electing him to the highest office it has to offer, but has brought honor to itself in so doing.

EARLY ARTERIAL DISEASE

The difficulty of early detection of arterial disease is generally recognized by internists as the chief obstacle to practical success in the management of such cases. Early diagnosis, except by supposition, is almost impossible by the methods available to the average clinician. Study of the retinal vessels by the ophthalmoscope requires considerable technical skill and wide experience and is therefore largely limited to trained ophthalmologists.

In a paper read before the Association of American Physicians in May, Harlow Brooks called attention to the fact that the conjunctival vessels show changes consonant with those present in the retina and describes a method for their

study originated by David Dennis. The assumption that the conjunctival vessels show changes similar to those in the retinal vessels is borne out by the fact that they spring from the same arterial trunk.

The only instruments required are the pocket flashlight and the ophthalmologist's loupe. The patient is directed to turn his eyes to one side, the light held at a distance of three or four cm. and directed obliquely onto the conjunctiva and the lens held at the proper focal distance with the eye of the observer brought close to the lens. Dr. Brooks goes on to say: "One is thus able to study in a most satisfactory way the larger branches of the ciliaries and palpebrals, the tiny arborizing arterioles and even the capillary circulation in the ocular conjunctivæ as well as the return circulation in the venules and the larger ciliary palpebral branches of the ophthalmic."

The evidences of arterial disease as shown by this method of examination are similar to those seen by ophthalmoscopic examination of the retinal vessels, namely elevation and tortuosity of the superficial vessels and occasionally nodes of lumen contraction. Attention is called to the great advantage incident to this method of being able to study the effects of the arterial disease upon adjacent tissue.

The simplicity of the method with the minimal degree of technical skill required make it a valuable aid in clinical work.

By the time the patient's history of subjective symptoms and ordinary routine physical examination make the diagnosis of early arterial disease more than a reasonable probability, ineradicable damage has been wrought and little more than a retardation of the process can be accomplished. Study of the conjunctival vessels would seem to offer the hope of a greater degree of accuracy in the early detection of arterial disease and consequently the hope of more satisfactory practical results in its management.

MEDIOCRE MEDICAL PAPERS

On numerous occasions we have received complaints from prominent members of the Association concerning the poor quality of many of the papers presented at our annual sessions and afterward printed in *THE JOURNAL*. Quite recently a very vigorous criticism concerning the mediocre character of several papers presented at the South Bend session has been received, and while the letter was a personal communication we asked that it be published in *THE JOURNAL*, after such editing as seemed indicated in order to eliminate personalities, but without securing consent of the writer.

We believe that these criticisms are, in a measure, amply justified. There really is no good excuse for the presentation of a purely text book

paper, or a paper that is so devoid of character or merit as to justify its consignment to the wastebasket. When a member of our Association presents a paper that has been copied, paragraphing, punctuation and all, from a late textbook on surgery, and expects the readers of that paper to give him credit for originality, it is time to call a halt. We recognize the fact that there are many medical and surgical subjects to which little can be added to what is already known and published in current textbooks and medical periodicals, but if any member insists upon discussing a threadbare subject, then let him review the literature and draw some conclusions from the opinions of various authors that will be of some value to readers. Probably the vast majority of papers read before our medical societies will be of that character, if they are worthy of presentation, but such papers are a real help and bring out discussion, to say nothing of proving an educational factor for the less experienced.

Plagiarism is common among medical writers, and indicates not only ignorance on the part of the one who is thieving from literature, but also a laziness that is inexcusable. For the man who has something original in the way of a theory as to the causation of disease or the method of treatment, we have the highest respect and accord the greatest praise. We have little use for the man who tries to get into the limelight by appropriating the work of others. The editor of *THE JOURNAL* has been criticized by some writers whose productions have not been accepted for publication, though in most instances when the writer was accused of plagiarism or lack of merit in the paper, and the charge sustained, there has been no further effort to force publication of the manuscript submitted. In the case of papers presented before the annual session, the editor has not felt justified in usurping the functions of the Program Committee, or in asking that the Publication Committee of the Council take action in ordering a poor paper pigeon-holed. However, the character of the papers presented at our annual sessions can be improved upon if the program committees will scan, in a critical manner, the contributions that are offered, and perhaps investigate to some extent the ability of those who are putting forth their maiden efforts.

Another subject that is interesting to the editor and should be of interest to all essayists is the matter of editing manuscripts. There is no excuse in this day and age for furnishing any copy that is not typewritten. There also is no excuse for offering for publication any manuscript that has not been carefully edited as to grammatical construction, paragraphing, spelling, capitalization and punctuation. One of the besetting sins of the average doctor who writes

a paper is that he utterly fails to appreciate how his badly constructed sentences may be interpreted, or how the thread of his discussion is lost through attention directed to verbiage. Another error of less importance is bad spelling, and in capitalizing the names of diseases, which latter is not permissible except in those few instances where the disease is named after the discoverer. Quotation marks should be used when authors are quoted, and due credit should be given to the opinions of others when appropriated. Abbreviations should be avoided as much as possible, as they are apt to be ambiguous or to be misinterpreted. Accuracy is not only desirable but a necessity if the author desires to avoid ambiguity or possibility of error. In short, a carefully prepared manuscript is not only a joy to the editor who has to prepare it for publication, but it bespeaks for the writer a reputation for intelligence, thoroughness and orderliness which should be the aspiration of every medical man.

So far as the kind of papers is concerned, a good rule to follow is that of one of the prominent sections of the A. M. A. which demands of its essayists papers which comply with the following: "First, such as may contain and establish positively new facts, modes of practice or principles of real value. Second, such as may contain the results of well devised original experimental researches. Third, such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance."

Program committees, if they innocently accept an undeserving paper for presentation before any session of our Association, should, after they learn of the unworthiness of the paper, refuse to sanction its publication in *THE JOURNAL*. Furthermore, no paper presented at any session of the Association should be approved for publication in *THE JOURNAL* unless it possesses merit and actually has been read or defended by its author.

NATIONAL CANCER WEEK

Under the auspices of the American Society for the Control of Cancer there will be conducted from October 30th to November 5th, inclusive, a nation-wide campaign against cancer. The campaign has been designated "Cancer Week". The chief aim of the campaign is the dissemination of such facts concerning cancer as are known with the end in view of reducing the mortality from this dread disease. There is no preventive medicine campaign of more importance to all the people and none giving promise of more interest and hope. The death rate from cancer (over 90,000 per year in this country) increased until 1916, since which

time it has remained stationary. This society was organized in 1913. If in three years the increase in the death rate from cancer has been halted may we not in reason hope soon to cause it to fall? It is conceded by those who have studied the subject most carefully that with our present knowledge the death rate can be cut in half. This would mean a saving of 50,000 lives annually. It is confidently hoped that every health agency in the country may use every endeavor to make "Cancer Week" yield the harvest of health and happiness which it can be made to yield if every man does his duty. The Hoosier State occupies an enviable position in the procession of progress and it is hoped and believed that she will hold her position in "Cancer Week". The burden of the campaign will rest largely of course on the shoulders of the medical profession, and THE JOURNAL is especially anxious that every medical and allied organization in Indiana do its "bit".

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE TIME—Wednesday, Thursday and Friday, September 28, 29 and 30, 1921.

THE PLACE—Indianapolis, Indiana.

THE EVENT—The annual session of the Indiana State Medical Association.

IN consideration of the fact that Surgeon-General Ireland is an Indiana man, he will receive a very hearty welcome as the guest of the Indiana State Medical Association at the Indianapolis session.

WE regret that an over-abundance of material for the September number of THE JOURNAL necessitated omitting Dr. Wynn's article from this number. However, the series will be resumed in the October issue.

FROM the number of letters we have received concerning our editorial on Christian Science in the August number of THE JOURNAL it is evident that our readers appreciate our efforts

to deal with Christian Science in a somewhat analytical manner, and discuss its various fallacies and inconsistencies.

As mentioned in the August number of THE JOURNAL, Indianapolis will be crowded with Grand Army veterans during the first days of the session of the Indiana State Medical Association. Therefore, those doctors who intend to attend the Indianapolis session of the Association will be wise if they secure their hotel accommodations in advance.

"PROTEOGENS", manufactured and sold by the William S. Merrell Company, again are being offered to Indiana physicians with extravagant claims as to virtue. We desire to call the attention of our readers to our comments in earlier numbers of THE JOURNAL, as well as to the report of the Council on Pharmacy and Chemistry of the A. M. A., concerning the value of "Proteogen" preparations. In short those doctors who base their work on rational findings will steer clear of "Proteogens".

INDIANA boasts of good roads and in consequence a large number of doctors will find it convenient and pleasant to go by automobile to Indianapolis to attend the annual session of the Association. The last time we met in Indianapolis a number of doctors lost their automobiles in a garage fire. This leads us to suggest that it is a sensible idea to carry automobile fire and theft insurance, but not to miss the Indianapolis session through fear of automobile loss by fire.

As usual we have had some difficulty in getting the copy for this number of THE JOURNAL. Many members are away on vacations, and most of them dislike to go to the trouble of preparing papers or making out reports. However, as a result of the usual pressure and keeping everlastingly at it, we are able to present the completed announcements for the Indianapolis session. We hope that the program will invite attendance and that each one of the papers will merit extended discussion.

IN a recently issued book on "Optimistic Medicine" attention is called to the unlimited and undeserved financial credit extended to patrons by the conscientious and qualified medical men, and a rather interesting picture is painted of the doctor who carries a family through all sorts of serious and dangerous illnesses only to see that same family take the simple ailments to the advertising doctor across the street who emphatically states "cash in advance". True, and the average doctor of respectable standing

will continue to extend credit, not a favor to the debtor, and keep on complaining because he does not succeed financially.

THE report of the chairman of the Committee on Education, published in this number of *THE JOURNAL*, not only points out the necessity for providing postgraduate teaching in Indiana but really shows what the University is willing to do. There is no reason why the large number of our Indiana doctors cannot secure postgraduate work in Indianapolis where there is an abundance of material, and where, as Dean Emerson says, the faculty of the University is ever ready to give instruction. The suggestion that the Indiana State Medical Association combine with the University authorities in arranging for courses of postgraduate instruction is worthy of serious consideration.

"THE CITIZENS MEDICAL REFERENCE BUREAU" is the pretentious title of an organization in New York which proclaims on letterheads its "opposition to compulsory medicine". In all probability this organization gets its chief impetus and support from the anti-vaccinationists and the anti-vivisectionists, and probably secures not a little encouragement from various pseudo-medical cults. Like all other enterprises which are fighting the work of the regular medical profession, the propaganda abounds in misrepresentation and falsehoods. However, the organization subscribes to some good medical journals, our own included, and the promoters ought to learn a few facts that may be of some benefit to them if their vein of honesty is not too badly contaminated.

THE success of the quacks and irregulars depends upon advertising, but even advertising would not have helped them if the regular medical profession had not failed to acquaint the public with the truth concerning scientific medicine. In reality we have been too ethical, in the sense that we have not taken the public into our confidence but have reasoned that the public ought to have sense enough to know that education, experience and training counts for more than ignorance, inexperience and no training. The public press is a moulder of public opinion, and if the regular medical profession had taken advantage of the public press in making the public acquainted with the accomplishments of scientific medicine, the public would not today be suffering from the effects of so much quackery and charlatanism.

AT last we have a cure for what most of us common mortals in the medical profession have considered incurable. So goes the promise of the chiropractors. In advertisements the an-

nouncement is made "Why Be Blind? Chiropractic Cures Blindness and Deafness." In keeping with this announcement we have been informed that a chiropractor, formerly a rather indifferent janitor but blossoming out into a doctor of chiropractic after a few weeks of college (?) training, is treating a deaf mute with a promise of restoration of hearing, and a case of senile cataract with a promise of restoration of sight. What a pity that so many of us didn't start in shoveling coal and afterward study a few weeks at the fountain head of chiropractic! How ignorant we are and how worthless is our University degree, and what a waste of time in spending four years at a medical college!

EVERETT SANDERS, United States representative from the Fifth district, of Indianapolis, has written to Dr. E. L. Larkins, of Terre Haute, Indiana, that he is in favor of the Sheperd-Towner bill and thinks that most of the objection to the bill has arisen out of a misapprehension of terms. Representative Sanders is mistaken in his conclusions. The principal objection to the bill is that it is a step in the direction of socialism, which bids fair to cause an endless amount of trouble. The scheme is a paternalistic one which is objectionable because it not only has a tendency to trample upon the rights and independence of mothers, but adds another link to those measures which aid in pauperizing a community. The fact that the bill places the matter in the hands of the Department of Labor is in itself sufficient to kill it. If any such measure is to be foisted upon the country it ought to be under the control of the Department of Health, and the latter department is not asking for any such legislation.

It seems a pity that Purdue University should lose its gifted president through a foolhardy attempt to do what others have not done in the way of dangerous mountain climbing. A certain number of our people seem to have a mania for doing dare-devil stunts and take particular delight in accomplishing results at the risk of their lives. Inasmuch as the average man in the rational pursuit of business or pleasure risks his life many times during the course of a year, it seems almost idiotic to take the unnecessary risks, with such great odds against them, as is included in the many hair-raising stunts that we read about every day and of which mountain climbing may be considered a close second. President Stone may have taken special delight in the risks that he regularly ran in attempts to climb precipitous mountains as a mere pastime, but he finally sacrificed his life, just as most adventurous people of that sort usually sacrifice their lives, and a great university has

lost a great man as a direct result of a morbid desire for thrilling adventure. Mountain climbing is a good deal like ballooning—the game isn't worth the candle.

THE lawyers are asking that the legislature provide stringent requirements for the practice of law. This is eminently fair, and there is no reason why the request should not be granted. It has been said that anyone either with or without a good moral character could be admitted to the bar in Indiana. This has not helped to improve the status of the legal profession, and has worked a great injustice to the public from the fact that many scalawags are branded as lawyers. It would be well if all lawyers were required to have at least two years' college or university training, supplemented by a law course of at least two years, before being admitted to the bar. The members of the medical profession sympathize most heartily with the lawyers in their efforts to improve their standards. Likewise the lawyers can appreciate the position we are in in demanding a high standard for the practice of medicine. It certainly is about as humiliating to a lawyer to have to extend the right hand of fellowship to an ignorant and thoroughly unqualified member of his profession as it is for a doctor to extend the right hand of fellowship to an arrant quack, even though the quack is licensed to practice medicine.

FROM a circular of information issued September 1, 1921, we quote the following: "The National Board of Medical Examiners was organized in 1915, by Dr. W. L. Rodman, then President of the American Medical Association. It began operation in 1916 with the purpose of establishing in this country a standard qualifying examination which could be safely accepted by all State Boards of Medical Licensure as an adequate qualification for the practice of medicine.

"During the past five years the Board has made such progress that it is now quite generally recognized, not only throughout this country but also in Europe. At the present time its certificate is accepted by the United States Army, Navy, and Public Health Services as a qualification for admission to the Medical Corps of each of these services; the State Boards of Medical Examiners of twenty states are accepting its findings in lieu of their own examinations, and the Conjoint Examining Board of England, as well as the Triple Qualification Board of Scotland, admit licentiates of the National Board to their final or clinical examinations. In eleven other states the Board's certificate will be ac-

cepted as soon as certain legal technicalities can be removed.

"The certificate will admit to the final examination (Part III) of the Conjoint Examining Board of England (Royal College of Physicians of London and the Royal College of Surgeons of England) and the Triple Qualification Board of Scotland. It also admits to the American College of Surgeons and the Mayo Foundation (Graduate School of the University of Minnesota)."

In this list Indiana is not represented. This certainly does not bespeak carefulness on the part of our State Board, but rather negligence, as there is no reason why Indiana should be lagging behind in the recognition of such a very worthy enterprise.

As will be noted in the report of the Committee on Industrial and Civic Relations, the courts have decided that a company or corporation employing a physician or surgeon to attend a sick or injured employee is not under obligation to pay the bill incurred, and furthermore, the Industrial Commission has no right to fix fees or determine who shall pay the fees charged by the attending physician or surgeon. This virtually puts the doctor in the position of having no standing in court and being obliged to take a chance upon securing remuneration for any services that are rendered a company or corporation. In fact it does not seem to place responsibility upon anyone, and even the corporation or company employing a doctor need not pay for the services if they desire to get out of doing so. In other words, there is no such thing as a contract, implied or otherwise, so far as a doctor's rights are concerned, and, likewise, there does not seem to be any moral obligation to live up to an agreement. Just why a doctor should be excluded from the privileges of securing justice is rather difficult to explain, though probably it is due to our well-known habit of accepting impositions as well as being "easy marks" in general in accordance with our reputation. However, there is an old saying that "you can lead a horse to water but you can't make him drink," so doctors can retaliate by making sure that they are to be treated with justice and fairness before they undertake to render valuable services.

THE frequent reports of deaths from asphyxiation in silos call attention to a menace to human life of which the public seems not to be aware. A silo is essentially a tubular tank of considerable height, designed to contain green fodder, generally corn. The silo is usually provided with doors at intervals along the sides to provide ventilation and to facilitate the removal of the ensilage during the feeding season.

As the silo is filled, these doors are closed. The immature corn is cut into small pieces by a cutting machine, and the chopped material is blown into the silo by a "blower" attached to the cutter. As soon as it is placed in the silo, the ensilage begins to undergo changes in a direction opposite to normal plant metabolism by which the oxygen content of the surrounding air is considerably decreased and the carbon dioxide content is largely increased. In some cases, nearly all of the oxygen is consumed. The carbon dioxide surrounding the particles of silage is supposed to be the principal preserving agent for the green fodder. If the doors immediately above the level of the silage are not kept open during the process of filling the silo, so as to allow for free ventilation, carbon dioxide is likely to collect in sufficient amounts during the night to endanger the lives of the workmen who enter the silo in the morning. Owing to the high density of carbon dioxide, it tends to collect at the surface of the silage so that workmen who sit or lie on the silage before the filling operation begins are much more likely to suffer than those who stand. Owing to the lack of information concerning the possible danger in filling silos, country physicians, whenever practicable, may well warn farmer patients who own silos relative to the danger mentioned.—*Journal American Medical Association*, August 27, 1921.

THE chiropractors are good advertisers. They know the value of publicity and are sensible in taking advantage of it. The osteopaths are either feeling the effects of chiropractic inroads, or else are profiting by the example of the chiropractors, for they too are beginning to advertise, and our newspapers are beginning to blossom out with articles on "What Osteopathy Can Do for You". We confess that we admire the real business acumen of all of the pseudo-medical cults that take advantage of the psychology of salesmanship by persistent advertising in the daily newspapers. If the people never hear anything but one side of a story, then that side is bound to be accepted by a large portion of the public. It doesn't make any difference whether the tale of the pseudo-medical cults bears the imprint of truth or not, it gains credence through lack of opposition or contradiction. The trouble with the regular medical profession has been that it is too content in believing that the old adage, "Truth is mighty and will prevail," should be permitted to place scientific medicine on the high plane where it belongs. However, had the regular medical profession been wise and done justice to itself as well as to the public at large, it would have taken the trouble to acquaint the public with the aims and accomplishments of scientific medicine, and under a

program of publicity that could have been rational as well as ethical there would have been no room for the development of the pseudo-medical cults that are founded upon the deification of ignorance and live by exploiting the public. In fact, advertising is the one thing that places quackery and pseudo-medical practice in the foreground and keeps it alive. Without advertising it would die. Therefore, chiropractic, osteopathy, napropathy and all of the other horde of cults that claim some peculiar method of curing or alleviating diseases must patronize the public press if they desire to live. However, we cannot help wondering why the regular medical profession has denied the public the value of information that would make it impossible for quackery to thrive as it does at present.

DEATHS

ARTHUR WHITE, M.D., of Rockport, Indiana, died August 11 at the age of 89 years. He was a graduate of the University of Maryland School of Medicine.

JOHN HAIG, M.D., of Bloomfield, Indiana, died in July at the age of 56 years. Dr. Haig was a graduate of the Miami Medical College of Cincinnati.

JOHN W. PUGH, M.D., died July 26, 1921, at Gas City, his home, at the age of 77 years. Dr. Pugh was a graduate of the Curtis Physio-Medical Institute, of Marion.

JESSE L. HILL, M.D., died at his home in Lowell on August 3 as a result of injuries received from a fall. He was a graduate of the Rush Medical College of Chicago.

JOHN W. BILBO, M.D., of Russellville, Indiana, died July 24 from paralysis and chronic nephritis, at the age of 69 years. He was a graduate of the University of Louisville, Medical Department.

FREDERICK M. AITKEN, M.D., of Bristol, Indiana, died August 22, 1921, at the age of 75 years. Dr. Aitken was a graduate of the Columbia University College of Physicians and Surgeons, New York.

W. H. COOK, M.D., of Fredericksburg, Indiana, died at Livonia, Friday, July 29, after several weeks' illness. Dr. Cook was a graduate of the Kentucky School of Medicine, Louisville, and was a member of the Washington County Medical Society.

WILLIAM EDGAR DOWNIE, M.D., Indianapolis, Indiana, died July 22, at the age of 35 years, following a nervous breakdown. Dr. Downie was a member of the Wyoming State Medical Society and the American Medical Association. He was a graduate of the University of Louisville.

CHARLES A. WHITE, M.D., of Danville, Indiana, died at the Deaconess Hospital at Indianapolis at the age of seventy-six years. Dr. White was a graduate of the Rush Medical College of Chicago and was a member of the Indiana State Medical Association and the American Medical Association.

GEORGE ROWLAND, M.D., of Covington, Indiana, died August 10, 1921, at the age of 81 years. Dr. Rowland was a graduate of the University of Michigan Medical School, Ann Arbor, and was a member of the Fountain County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. GEORGE R. DANIELS has been made republican nominee for mayor in the city of Marion.

THE Lawrence County Medical Society held its monthly meeting at Bedford, Indiana, on August 3, 1921.

DR. C. A. SELLERS, of Hartford City, was operated upon August 5 at the St. Joseph's Hospital, Fort Wayne.

THE annual picnic of the Clinton County Medical Society was held August 4 at the country home of Dr. Sims.

DR. H. C. DAVISSON, of Hartford City, who has practiced medicine in that city for the past sixty years, has retired.

DR. JOHN H. STORK, of Petersburg, suffered a slight stroke of apoplexy on August 2, but has practically recovered.

DR. WILLIAM N. WISHARD, Indianapolis, spent his vacation in Glacier National Park, where he enjoyed mountain climbing.

DR. E. S. WAYMIRE, of Denver, has resigned his office as County Coroner. Dr. E. A. Carlson has been appointed to fill the vacancy.

DR. NATHANIEL CORN, of Pikeville, Indiana, was severely injured July 30 when he suffered a kick in the face from his horse.

THE members of the Lake County Medical Society with their families held their annual picnic at Whiting Park on August 12, 1921.

DR. F. M. PRAY and wife, of Muncie, left July 24 for Philadelphia, where Dr. Pray will take some special work in eye, ear, nose and throat diseases.

DR. FERNANDE J. I. HATCHAT, for the past few years physician for the girl students at Indiana University, was married to Thomas S. Luck, on August 10.

DR. CARLTON DANIELS and wife have removed from Corydon to Indianapolis, where Dr. Daniels will take up the special practice of eye, ear, nose and throat.

DR. JAMES V. NELSON has been elected house physician of the Rehabilitation Home for World War Veterans at Marion and will take up his residence in that city.

THE graduating exercises of the Training School for Nurses of the Fletcher Sanatorium, Indianapolis, were held on August 18. Six nurses received diplomas.

DR. HIDEYO NOGUCHI, of the Rockefeller Institute, has introduced a serum which is intended, by establishing an immunity, to reduce the mortality from yellow fever.

DR. JOHN H. TALBOTT, 2043 North Delaware street, Indianapolis, who has served for the past thirty-two years as a medical examiner for the Pennsylvania railroad, has retired.

DR. JOSEPH CLAYPOOL, of Mellott, Indiana, suffered a stroke of apoplexy on Monday evening, August 8, while in his office. He is reported as being in a serious condition.

DR. ALFRED HENRY, of Indianapolis, was named consultant on medical field service and clinical tuberculosis by the National Tuberculosis Association in its list of specialized consultants.

DR. MARION WYGANT, who has been practicing for the last year at the City Hospital in Indianapolis, has located at 511½ North Main street, Mishawaka, Indiana, for the practice of medicine.

DR. JAMES STANTON, of Logansport, has been selected by the United States government to special duty as a member of the "flying squadron" which is to care for the claims made by ex-service men upon the government.

THE doctors and their families, nurses, assistants and technicians of the Clinic of Garrett were entertained at an outing at Wawasee Lake by Dr. C. E. Howard and family. Dr. Howard is a member of this clinic.

A FRESH warning has been issued by Surgeon General Cumming, of the United States Public Health Service, against the use of horse-hair shaving brushes for the reason that many cases of anthrax have been traced to their use.

DURING August the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Beebe Laboratories, Inc.; Beebe Protein Milk, Beebe Modified Buttermilk.

A HOSPITAL program for war veterans has been announced by Col. Charles R. Forbes, director of the Veterans' Bureau, involving the expenditure of \$6,110,000. Additional buildings are to be erected and improvements made at various places.

THE Gibson County Medical Society held a meeting at the home of Dr. S. I. Arthur, of Patoka, Friday, July 29, the general subject of discussion being public health and sanitation. Papers were read by Dr. S. I. Arthur and Dr. R. A. Cushman.

DR. C. C. RAYL, of Decatur, will remove from his rooms in the Allison block to a new office in the Pumphrey building, which is just being completed. Dr. Rayl's new suite will consist of a reception room, private office, x-ray and laboratory rooms.

DR. S. P. HOFFMAN, who has been taking postgraduate work in the East, has returned to private practice and has opened offices in the Medical Arts Building, Fort Wayne. Dr. Hoffman was formerly associate medical director of the Lincoln Life Insurance Co.

DR. G. W. H. KEMPER has returned to California after spending several weeks in Indiana adjusting business matters. He reports that his

general health is greatly improved as a result of the California climate. He is located at 1239 East Orange Grove avenue, Pasadena, California.

Six thousand five hundred and nine suicides were reported to the Save-a-Life League in the first six months of the year 1921, 4,527 of whom were males and 1,982 females. During the first six months of 1920 2,771 suicides were reported in the United States, 1,810 of whom were males and 961 females.

DR. H. R. O'BRIEN, of the United States Public Health Service, Washington, has arrived in Indianapolis, where he will collect statistics concerning the life and health of miners and quarrymen in Indiana. Dr. O'Brien will be assisted in his work by Dr. J. N. Hurty, Secretary of the State Board of Health.

THE United States Civil Service Commission announces open competitive examination for Associate in Clinical Psychiatric and Psychotherapy. Application for this examination will be received by the Commission at Washington, D. C., until the hour of closing business on December 1, 1921. Applicants should apply at once for Form 2118, stating the title of examination desired.

THE United States Civil Service Commission announces open competitive examinations for the positions of Roentgenologist, Associate Roentgenologist, Assistant Roentgenologist and Junior Roentgenologist. Applications will be rated as received until December 1, 1921. Applicants should at once apply for Form 1312, stating the title of the position desired, to the Civil Service Commission, Washington, D. C.

DR. FRANK B. WYNN, of Indianapolis, is heading a mountain climbing party in Glacier National Park, Montana, which will attempt to climb Mt. Saint Nicholas, one of the steepest mountains in the world and one that, as far as records show, has never been climbed. Dr. William N. Wishard, of Indianapolis; Dr. H. H. Goddard, of Columbus, and Dr. Silas Neitert, of St. Louis, are some of the members of the party.

ONE of the main features of the Cincinnati exposition to be held in Music Hall, Cincinnati, October 15 to 22, is Rural Sanitation Day. Dr. C. L. Lumsden, of the United States Public Health Service, will be one of the principal speakers and a program of special interest to farmers and their families has been prepared that will show in a comprehensive and simple manner the way the farmer can best safeguard his health and that of his family.

At the ninth annual session of the Mississippi Valley Conference on Tuberculosis, Illinois, Indiana, Iowa, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin and Ohio will report at Columbus, September 12-14. Addresses will be given by Dr. Allen K. Krause, Baltimore, director of the Dow's Foundation for Tuberculosis Research; Dr. H. Emerson, New York, and Dr. James A. Miller, New York, president of the National Tuberculosis Association.

ATTENTION of the members attending the Indianapolis session is invited to the following list of commercial exhibitors who will be at the Claypool Hotel: Room 846, Max Wocher & Son Company; Room 844, W. D. Allison & Company and Radium Chemical Company; Room 842, Swan-Myers Company; Room 840, Medical Protective Company and W. H. Armstrong Company; Room 838, Victor X-Ray Corporation; Room 836, Frank S. Betz Company; Room 832, Radium Company of Colorado; Room 825, Chas. H. Phillips Chemical Company; Room 830, Horlick's Malted Milk Company and Dr. G. H. Sherman; Room 826, Lederle & Company and Hynson, Westcott & Dunning. Other rooms may be taken later by other firms, which will add to this list.

ACCORDING to a recent announcement, Harvard University is to have a School of Public Health, such school being made possible by the Rockefeller Foundation. The new school will be housed in an existing building immediately adjacent to the medical school, but the work will be developed in close relations with other divisions of the University, especially the medical school. It will provide opportunities for research, will unify existing courses and will offer new or extended teaching facilities in Public Health Administration, Vital Statistics, Immunology, Bacteriology, Medical Zoology, Physiological Hygiene and Communicable Diseases. Practical field experience and practical experience in Industrial Hygiene will be afforded the students through cooperation with the laboratories, hospitals, and public health agencies and the manufacturing and commission corporations in Boston.

THE semi-centennial celebration of the American Public Health Association will be held in New York City, November 8 to 18. The program includes a Health Institute to be held from the 8th to the 12th, during which time there will be organized demonstrations of various types of public health activities in New York and environs: Health Department Bureaus,

Laboratories, Health Centers, Clinics, Hospitals, etc. The scientific session will be held from November 14 to 18. The program is divided into the following sections: Laboratory, Vital Statistics, Public Health Administration, Sanitary Engineering, Industrial Hygiene, Food and Drugs. There also will be special programs on Child Hygiene and Health Education and Publicity. An interesting feature of the celebration is the fact that Dr. Steven Smith, the founder and first president of the Association, now living in his ninety-ninth year, will be the guest of honor at a banquet to celebrate his approaching centennial. Detailed information concerning the celebration may be had by addressing the Association at 370 Seventh avenue, New York City.

AN attractive innovation in medical meetings has been undertaken by the Mississippi Valley Medical Association, to be held in St. Louis on October 13, 14 and 15. For this occasion a most unusual program, entirely free from the ordinary trite and formal medical paper reading, has been arranged.

Program participants have been carefully selected from eminent specialists among the leading authorities in the various fields of medicine. The preliminary announcements contain such names as Dr. Llewellys F. Barker, of Baltimore; Dr. Anthony Bassler, of New York; Dr. Chas. H. Frazier, of Philadelphia; Dr. John de J. Pemberton, of Rochester, Minnesota; Dr. Isaac Abt, of Chicago; Dr. C. Jefferson Miller, of New Orleans, and others of equal prominence. These noted clinicians have accepted invitations to give scientific addresses (not papers) consisting of clinical demonstrations and discussions upon borderline subjects pertaining to their particular specialties. Because of their clinical bearing and wide medical scope, the subjects chosen will undoubtedly be of more interest to the general practitioner than to the specialist.

The third day of the program will be given over to clinics in the various St. Louis hospitals and universities, at which the guests of this Society, as well as St. Louis physicians, will participate.

The date of this meeting coincides with the Centennial Celebration and Pageant of St. Louis, which event will no doubt afford additional means for entertainment and social enjoyment to those attending this meeting. Dr. William Engelbach, University Club Building, St. Louis, is chairman of the Committee of Arrangements and will answer inquiries requesting further information.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8
22.	Fulton	A. E. Stinson	15	17
23.	Jay	C. A. Paddock	18	20

THE TRUTH ABOUT MEDICINES PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the curative claims made for them were unwarranted: Hoffman's Celebrated Mixture (Solomons Co.), essentially an alcoholic solution of copaiba and opium. Aspironal (Aspironal Laboratories), essentially a solution of sodium salicylate, cascara, a small amount of mydriatic alkaloids and a trace of menthol. Lozon Pills (Lafayette Co.), consisting essentially of ferrous carbonate, nux vomica, damiana, arsenic and a laxative plant drug. La Nobleza and Sin Igual (Juan Gandara), the first, a solution containing plant extractives, including saponin (sarsaparilla), a plant laxative, sugar, alcohol, water and traces of alkaloids; the second, a watery solution containing gum, a plant laxative, licorice, and faint traces of alkaloids. Silverstone's Internal Remedy (H. Planten & Son), capsules containing resins and volatile oils, including copaiba and cubeb. Yellow Pine Compound (Yellow Pine Extract Co.), consisting of turpentine mixed with magnesium oxide and a small amount of jalap. Thomas Emmenagogue Pills (Palestine Drug Co.), consisting essentially of ferrous sulphate, aloes and an unidentified alkaloid. Nyal's Prescription "23" and Nyal's Prescription "23" Pills (Nyal Co.), the first a liquid consisting essentially of zinc sulphate, boric acid, Golden Seal, glycerine and water; the second, consisting essentially of ferrous sulphate, copaiba balsam, oleoresin of cubeb and alkaloidal material.—(*Jour. A. M. A.*, Aug. 6, 1921, p. 481).

MODE OF ACTION OF SOME COMMON LAXATIVES.—Calomel has been currently represented to act by promoting the secretion and retarding absorption, so that an accumulation of the abundant fluid and the consequent evacuation of the semisolid contents ensues. However, a recent investigation in the Pharmacologic Institute in the University at Utrecht by Van der Willigen indicates that absorption in the gastro-intestinal canal is not interfered with in the presence of calomel, and that the drug functions by promoting more vigorous movements of the small and large intestine whereby the contents are propelled so rapidly toward the rectum that absorption

BOOK REVIEWS

THE ALLEN (STARVATION) TREATMENT OF DIABETES

WITH A SERIES OF GRADUATED DIETS. By Louis Webb Hill, M.D., Junior Assistant Visiting Physician, Children's Hospital, Boston; Alumni Assistant in Pediatrics, Harvard Medical School; and Rena S. Eckman, Dietitian, Massachusetts General Hospital, Boston, 1911-1916. Fourth Edition. Price \$1.75. Boston: W. M. Leonard, 711 Boylston Street.

This little manual of one hundred and forty pages gives the details of the Allen treatment in a manner that can readily be understood by both physician and patient. The diet lists and recipes should be studied by every medical man who is attempting to treat diabetes. The book is of especial value for the patient because, as the authors remark, "It is not particularly important for a diabetic to know a great deal concerning the theory of the disease, but it is vital for him to be able to plan his diet intelligently, and to cooperate with his physician." Many physicians will be interested in the statement that "the consensus of opinion is now that it is best not to give soda bicarbonate to diabetics, and that acidosis can be by far better controlled by keeping the fat intake low". It is of some value to learn that Bond's Diabetic Flour and Gluten Flour, made by the Mayflower Mills of Fort Wayne, Indiana, contain, respectively, 40.6 and 28.6 percent of starch.

PHYSICAL DIAGNOSIS. By W. D. Rose, M.D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas; Demonstrator of Clinical Medicine and Chief of the Medical Section of the Isaac Folsom Clinic; Visiting Physician Logan H. Root's Memorial Hospital, Little Rock, Arkansas. Second Edition. St. Louis: C. V. Mosby Company. Price \$8.50.

In his foreword the author says: "In the preparation of the present volume the text has been largely rewritten and supplemented by new material in order to cover the recent advances in the subject." The book contains three hundred and nine excellent illustrations. The text is clear and well written. The work is divided into four parts; part one deals with the thorax, part two with the abdomen, part three with the head, neck and extremities, and part four with the nervous system. There is also a chapter on the x-ray as an aid in diagnosis by Dr. Dudley E. Mackey. This work can be recommended as a reliable text-book on physical diagnosis.

EPIDEMIC RESPIRATORY DISEASE. By Eugene L. Opie, M.D., Colonel, M.R.C., U. S. Army; Professor of Pathology, Washington University School of Medicine. Francis G. Blake, M.D., Major, M.R.C., U. S. Army; Associate Member of the Rockefeller Institute for Medical Research. James C. Small, M.D., formerly First Lieutenant, M.R.C., U. S. Army; Bacteriologist Philadelphia General Hospital; and Thomas M. Rivers, M.D., formerly First Lieutenant, M.C., U. S. Army; Associate in Bacteriology, Johns Hopkins University. Price \$6.50. St. Louis: C. V. Mosby Co., 1921.

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preparations are as varied as their
number and to some extent at least
have served to confuse the medical
profession as to the value of Benzyl
therapy. For complete information as
to the proper use of Benzyl prepara-
tions and a list of their indications,
write

Hynson, Westcott & Dunning
BALTIMORE

(Continued from page 338)

This book describes the studies made by the authors at Camps Funston and Pike during the epidemic of respiratory diseases in 1918. Chapter one deals with the etiology of influenza and the authors are of the opinion that "consideration of all the evidence available makes it seem highly probable that the B. influenzae is the specific etiologic agent of epidemic influenza". It is seen in chapter two that the authors regard influenza as a relatively mild disease which tends to rapid spontaneous recovery and they look upon pneumonia simply as a complication. It is of significance, as they point out, that "pneumonia following influenza presents no uniform clinical picture, no uniform bacteriology and no uniform pathology". Chapter four is devoted to the study of the pathology and bacteriology of pneumonia following influenza and embraces considerably more than a third of the entire book. There are chapters on secondary infection in the ward treatment of measles and the pathology and bacteriology of pneumonia following measles, while in the final chapter Opie gives a summary of the investigations and the conclusions reached. The authors have justified their scientific reputations by producing a book which will be read by all those who are interested in this subject of epidemic respiratory diseases.

OPERATIVE SURGERY. By J. Shelton Horsley, M.D., F.A.C.S., Attending Surgeon, St. Elizabeth's Hospital, Richmond, Va. Price \$10.00. Pp. 721, with 613 original illustrations by Miss Helen Lorraine. St. Louis: C. V. Mosby Company, 1921.

Of course, Dr. Horsley has written an excellent book. The book is of particular value because it is to a great extent the record of the personal experience of a distinguished American surgeon. Dr. Horsley states in the preface that "No attempt has been made to include in this volume all surgical operations. Such an encyclopedia is found in many excellent text books and systems of surgery. Every operation that I have described is either one that I have done or else an operation that appears to me to be the one best suited for the disease." The author tries to stress the preservation of physiologic function. In the first chapter, labeled "General Considerations", Horsley quotes frequently from Cannon and, in an instructive manner, discusses many of the problems in physiology which confront the surgeon. When one reads the chapter on drainage he has a feeling that possibly the author, like most surgeons, is a bit unsettled in his own mind as to the indications for and the value of drains. Chapters six and seven set forth Horsley's well-known views on blood transfusion and the suturing of blood vessels. There is also a short chapter on reversal of the circulation wherein it is shown that a reversal does not take place after an anastomosis of the femoral artery and vein and that, in impending gangrene of the feet, the same therapeutic results can be obtained by simple ligation of the femoral vein. As the book only includes those procedures which in the author's personal opinion are of especial value one should find no fault with the exclusion of many accepted operations, however, considering its importance the method of performing a thyroidectomy has been slighted. The author takes some pains to prove that the best method of treating the stump of the appendix is simply to ligate and disinfect it. Horsley is a bit careless about giving credit for originating methods, for instance, he speaks of the "method of Murat Willis" in

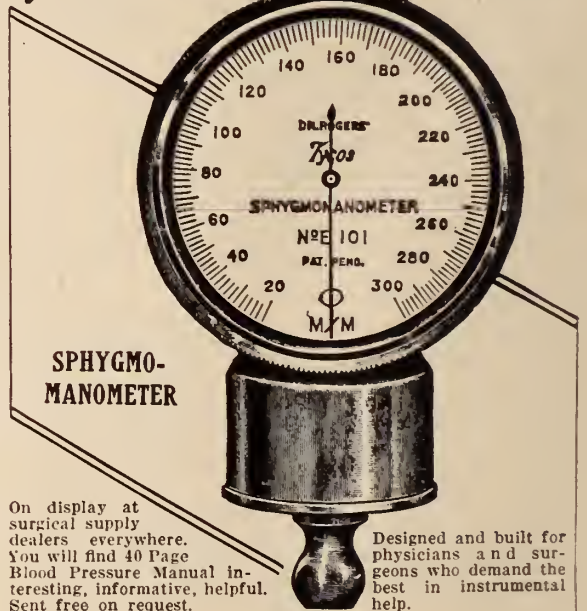
which the stump of the cystic duct is buried, after cholecystectomy, and the wound closed without drainage. Although Horsley and Willis both live in Richmond, Virginia, the method was described by Witzel at least twelve years before it was practiced by Willis. The splendid illustrations by Miss Helen Lorraine are deserving of particular praise.

THE EVOLUTION OF DISEASE. By Prof. J. Danysz, Chef de Service Institute Pasteur, Paris. Translated by Francis M. Rackemann, M.D., Assistant in Medicine in the Harvard Medical School; Assistant in Medicine in the Massachusetts General Hospital, Boston, Massachusetts. Price \$2.50. Philadelphia and New York: Lea & Febiger, 1921.

This fascinating little book will repay the time and effort spent in its reading and study. The author discusses the immune reactions occurring in infectious and non-infectious diseases, and he develops a theory of immunity, of anaphylaxis and antianaphylaxis. The author has decided that "all the chronic morbid states with their periods of acute crises alternating with longer or shorter remissions, originate from antigens, and are determined by the state of immunity—anaphylaxis of the organism. The experimental confirmation of this hypothesis has shown in reality that the anti-anaphylactic treatment is of unquestionable efficacy in all these chronic diseases in which we have been able to apply it up to date (except organic mental diseases) and a long series of observations corroborates this." The case reports of chronic diseases, especially dermatoses, treated by antigens obtained from the intestinal flora are unconvincing.

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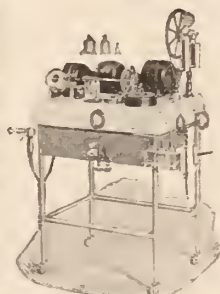
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ORIGINAL ARTICLES

SUBMUCOUS RESECTION OF NASAL SEPTUM*

KARL T. BROWN, M.D.
MUNCIE, INDIANA

Submucous resection of the nasal septum has long since been of especial interest to me because a large part of our nasal cases are of the type known as septal deflections, and, further, because a great part of our throat and accessory sinus cases are a direct result of nasal obstruction.

I shall not attempt to offer anything particularly new on the subject, but will discuss the methods of correction of this defect that I have found to be the most satisfactory, and I take it for granted that most of you have discarded the older methods, and are doing some of the submucous operations. I do not think any of the various methods in use are perfect in themselves, but all have their "selling points", and I usurped the best of them for use in given cases.

Let us discuss for a moment the various forms of deflections and the indications for a resection as well as the contraindications.

I prefer to place deflections in three classes, namely, simple, slight and extensive. By simple deflections I mean those deflections in which there is only a small amount of interference. By slight deflections I mean those deflections in which the deflection is more pronounced, and in which there is at all times an interference with drainage and this class is usually confined to one side. By extensive deflection I mean those cases in which there is complete closure and interference with drainage and respiration of one or both sides, and it is usually both sides in this class.

As to indication for operation in the first class, would say that only when other means have failed would I operate. In the second and third class, operation is always indicated where there is interference of drainage and respiration, as there will be in these classes, and especially

if associated with chronic inflammation of the accessory sinuses, diseases of the pharynx and certain middle ear affections.

As to contraindications, I would consider the age of the patient, and would not operate on a patient living on borrowed time, as it is not a life saving operation, and I would not, except under exceptional circumstances, operate on a child under sixteen years of age, as it has been proven that the development of the septum has a marked influence on the face in the adult life, and Lathrope reports that out of eight cases in children under thirteen years of age, on whom submucous operation was made, five showed a marked depression of the tip of the nose. Syphilis and tuberculosis of the tract is another contraindication of importance, as is chronic kidney inflammation, carcinoma and other general conditions, the prognosis of which would lead to expect an early death. These would, in my opinion, be contraindications for a resection.

Having tried most all methods of anesthesia, including general, the pack method of cocaine solution, the cocaine crystal, etc., I have discarded them all for the cocaine spray to which I add my adrenaline solution, and in the use of this spray I have found that with a good atomizer, such as the De Vilbiss Atomer No. 16, I get a complete anesthesia in very little time by making a spray into each nostril after which the patient is instructed to blow the nose, which takes out the surplus, and the spray is again repeated in each naris, and the patient again instructed to blow the nose, and after a few repetitions of this process I find I have complete anesthesia for the entire operation.

Anesthesia being completed, I remove all hair within the nares, by clipping close with sharp pointed scissors, after which I irrigate each naris, and, if necessary, use the Sorensen suction apparatus to draw out all mucus and pus that may be dammed up behind the obstruction.

My next step is to introduce in the naris in which there is the greatest convexity a Freer's submucous nasal speculum, and with the nurse standing behind the patient, she makes traction outward and backward, thus giving me plenty of room and a clear field for my initial incision,

*Read before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association at the South Bend session, September, 1920.

which is made through the mucoperichondrium and is vertical and almost invariably on the side showing the greatest convexity, and for this incision I use the Ballenger septal knife, extending the incision from well up under the dorsum of the nose down into the floor of the nose. In making the vertical incision, I do so for the reason that it has given me more satisfaction than has any modification, for there is less gaping of the wound, and hence a less amount of granulation called for to fill up the wound.

Having cut down through the mucoperichondrium to the cartilage, I then use a Freer submucous elevator and strip the perichondrium free from that side. Then, with the Ballenger septal knife I enter the original wound and cut through the cartilage, having inserted my finger in the opposite nostril as a guide and protection against perforating the mucoperichondrium of that side. Then, with the Freer elevator, that side is stripped, after which I insert a Foster-Stein submucous speculum, straddling the cartilage. With the Ballenger swivel knife, the cartilage is cut along its upper border as far back as possible, the knife is brought down and forward, completely severing the cartilage, which is then removed and after correcting its abnormalities it is placed in normal salt solution to be replaced in the wound at completion of the operation to give support to the membrane and have a near approach to the normal septum. The cartilage having been removed, the next step is to remove the Foster-Stein speculum, and a pair of Freer's right-angle submucous speculums are inserted within the wound, and with the nurse standing behind the patient, traction is made outward and backward on the wound, thus giving me a clear field of vision, and with the Mials ridge forceps biting off the bone well up and backward, and along the floor, we make our correction. The Freer septal chisel is used to remove the crest and it is important that enough bone be removed at this point, as I have seen many cases in which the operator had failed at this point and the patient was not much better off than had he not had an operation at all.

The edges are now smoothed off and the wound cleared of all debris and the speculums removed, after which a dry Simpson intra-nasal tampon is inserted in each nostril, and, with a dropper, the tampons are saturated with sterile water, thus swelling up and giving even pressure on both sides. These remain for twenty-four hours, after which they are removed and the nares irrigated with Dobell's solution, and this solution is used as an irrigation once per day for three days, after which no further attention is demanded.

I prefer to keep the patient quiet for a few hours after the operation, and, as a rule, permit

them to resume their work on the third day, and possibly sooner, depending on their occupation.

DISCUSSION

DR. TOMLIN (Indianapolis): This paper has been a clear exposition of the essayist's method of deciding upon the class of cases which he would operate, and also a definite delineation of his method of operating. There are a good many ways of doing a good many things. They all have good points, and if we could combine these good points with those that we have already been able to reach, we would improve our technique. And after one has improved his technique, he can take advantage of many situations to shorten the time of his operation.

I think the Doctor's classification is particularly good. It is simple, and if my observation holds true, simplicity is the point to which all improvement tends. He bases his classification upon pathological grounds. You see many cases with large angularities in the septum where there does not seem to be any trouble because of it. They may be engaged in some occupation where they come in contact with considerable sepsis, but something else in the contour of the lumen takes the place of a straight septum, they have good drainage, and, except for a slight cold for which you may be consulted, there is no trouble at all. Such cases may not be subjects for operation, and should not be.

Then, on the other hand, we find a deformity in the septum, which, from a physical and a visual standpoint is very slight, and yet we find that patient continually having recurrence of nasal infection or sinus inflammation, and the correction of this slight deformity will accomplish very much for him, more, sometimes, than in cases where there are greater deformities. So I commend this classification. It is scientific, and it is also, what is of very much more importance to the patient, very practical.

I am not able to agree with the essayist in his conclusion as to the age at which patients may be operated. If I remember correctly his position in the matter was very largely one of quotation. I have not observed, in operating on quite a number of children at twelve years of age (and I have operated even as early as eight years of age, and some of those cases are as far back as ten years now), that it has really made any difference in the apparent development of the nose, and in some of those cases it seems to have made a very marked improvement in the development of the child. I think that we should go into those cases a little more closely than we would in an adult, but where a child is suffering from a poorly ventilated and poorly drained nose, is becoming pigeon chested, and has a tendency to become asthmatic on account of a poorly drained nose, then I think that

septum should be straightened, and the child should be given an opportunity for bodily development.

I have not used the cocaine spray, but hearing it so warmly commended here I am going to try it. It is certainly simple, and if it is effective I am for it.

I have used the Freer method of the adrenalin cotton dipped in flaked cocaine, but I am aware that the necessary manipulation of even very gentle rubbing of the mucous membrane repeated three times does give rise to some mechanical irritation of the membrane, and if I can avoid that by using a spray just as effectively, then I shall use it.

In a number of cases I have used the Sluder method of the tampon placed over the sphenopalatin ganglion and over the nasal nerve. That does very well, but you have to wait a little while—about fifteen minutes.

I do supplement the Doctor's incision to some extent. As I remember, he spoke of it as going well down to the floor of the nose. In my cases I make an incision down to the floor of the nose, and make as near the junction of the skin and the mucous membrane as I can, trying to leave a little of the skin as a selvage edge, and when you put the flap over with the selvage edge of skin the nose heals very well and you never have any trouble with it. I do not replace cartilage in these cases, or at least in all of them, as I understood the essayist said he did. I always preserve it, and if by some unfortunate chance I should have a little rent in the membrane I put a piece of cartilage opposite that rent.

There is one point in the development of the operation that I would like to recommend to you, which will save much time. When the ridge of the vomer is deflected, and the cartilage has been hypertrophied, it is rather a useless waste of time to dissect down underneath and go all the way back and take up ten or twenty minutes of time. Use your "V" shaped chisel, running the upper point between the perichondria, and the other point under the membrane, and you can run it straight back and take it all off at once. You can do it in about three minutes. Some operators who are skillful and experienced put in fifteen or twenty minutes or longer time than that gently, carefully and persistently dissecting the septum to get in underneath. The "V" shaped chisel will take it all off at once, and do it very nicely. In these cases I am in the habit of using tampons that are well saturated with oil. It makes them come out so easy. You can use an inch strip of iodoform gauze saturated in sterile olive oil, and it packs very nicely and removes very easily. Formerly I left these packings in for 48 hours, then I changed to taking them out in 24 hours,

and now I find if I take them out in twelve hours they do better, heal more rapidly and with much less trouble.

Fortunately up to the present time I have never had an infection in a submucous operation. I might meet my Waterloo tomorrow, but it has served the purpose very well to wipe these cases out well with dry cotton, gently mop the surface, especially the anterior part, with fifty percent tincture of iodine and alcohol before I make the incision.

In regard to irrigation following the operation, I followed the instructions of my predecessors in this line of work, and found that my cases were too much prolonged, that they did not do as well or heal as quickly as they ought to. Then I had some cases that came in for operation, and they got out of my hands earlier than the ones that I had been taking care of before, they left the city or for one reason or another they got out of my hands, and I found they did a great deal better than the ones I irrigated, so I quit irrigating.

DR. D. O. KEARBY (Indianapolis): I have found better postoperative results by making a pretty free drainage incision low down on the flap, on the opposite side to my primary incision. It heals readily, and where there is accumulation of serum in between the flaps, as will usually occur, it finds free exit through the cut and obviates a stuffy nose, which one frequently will get.

There is one other thing that I would particularly call your attention to in doing a submucous operation. The average patient coming to you from his home in town or in the country is generally immune to the infections that may be about him, and you get along nicely with him. But in our work in the city of Indianapolis we have more or less of these operations to perform upon nurses, students and internes who live about the hospitals. I would urgently emphasize the point that any patient coming from any sort of an institution where they are in contact with all sorts of infections, be kept away from such place of residence for ten days or two weeks before you operate. There is danger in doing a submucous operation just as there is in tonsillectomy.

I had an unfortunate experience with a patient who came to me for operation, and who had been living in a hospital. One experience is sufficient, and I now make a special inquiry of my patients as to where they are living, their mode of living, and I want them in the best sort of condition before I do a submucous operation.

I have found one condition in the nose that I frequently do a submucous operation for, not because the nose has not good drainage and

free respiration, but because of headache. Usually the patient has been to the ophthalmologist, and the ophthalmologist has found an error of refraction. Appropriate lenses have been prescribed, but the patient will have failed to secure the relief anticipated. To discuss the thing properly one would have to go back to the histology and the pathology of how these things arrive in the nose. There will be a deflection of the septum high up, bringing it over in contact with the anterior edge of the middle turbinate bone. The least little congestion or cold causes a swelling, and the patient has a headache that will be over that particular side affected, radiating back over the temporal region, and frequently they will complain of a peculiar pain in the ear. You examine the ear and find no evidence of pathology, but upon examination of the nose you will find the above mentioned conditions. By placing a small pledget of cotton, saturated with a 4 percent solution of cocaine against the anterior end of the middle turbinate, or else go back, as Dr. Sluder recommends, and anesthetize the sphenoplatine ganglion at the posterior tip of the middle turbinate, and your patient gets relief in just a few seconds. I find that doing a submucous operation and relieving that deviation high up where it comes in contact with the middle turbinate gives some brilliant results.

DR. CHARLES J. ADAMS (Kokomo): In 1905 I had this operation performed on myself, and on trying to drink a cup of coffee following the operation I found that I couldn't swallow very well. The packing in my nose would move forth and back like a piston, causing a lot of trouble. I thought there surely must be some way of remedying this trouble, so I decided in my septum cases to place a rubber tube with a lumen about one-eighth of an inch in diameter in the floor of the nose in the side opposite to the incision. The nose acts as an escape valve whenever you swallow, and this procedure allows the air to blow out through this tube and relieve the pressure in the ora-pharynx and your dressing does not move back and forth in the nose.

Whether this is original with me or not I don't know. But if you have never tried it, I would advise you to do so. Put in a sterile tube in the side opposite the incision. If the tube stops up you can take a dropper and wash it out. The patient gets just a little air through that tube, and it helps a whole lot.

DR. W. A. HOLLIS (Hartford City): There is one procedure as practiced by Dr. Brown that personally I would not endorse, and I see no occasion for doing it. That is, replacing the triangular cartilage or any part of it. The support of the nose is not dependent upon the triangular cartilage. The bridge of the nose

will not sag unless you have a chondritis and a chondritis is not going to develop without an infection, or unless the patient is a syphilitic. By re-introducing this cartilage you are liable to create a space which will permit the accumulation of blood clot, and in that way prevent the apposition of the new periosteal and perichondrial surfaces.

We can recall instances in which children, for instance, have fallen on the sidewalk upon their faces. The fall had separated the perichondrium from the cartilage on either side, resulting in the pouring out of lymph. If an infection is not introduced, it will be absorbed, the cartilage will become re-attached to the perichondrium. But in the presence of an infection the triangular cartilage is absorbed, and with it the cartilage of the ridge, resulting in a sagging nose. So in the replacing of the cartilage which you have removed you may have this same condition. The nose is not clean; it cannot be made clean. We operate so successfully and get such brilliant results because of our immunity.

As to the submucous resection upon very young children. You seldom get a good result. The ossification centers are not complete until the ages of fourteen or fifteen. The septum continues to grow, and if you remove any part of the bony septum there may be new deformity spring up. And if you attempt to improve a submucous resection on an individual that has been operated upon in childhood, in which the results have not been good, my experience is that every time you make the condition worse. However, if the deflection is of the triangular cartilage alone, and the child is very young, and the nares occluded, I think you are justified in removing that triangular cartilage *in toto*, or as much as is necessary. But do not touch the bone.

Another mistake that is sometimes made in a submucous resection is in not taking out all the deformity. You cannot go too high; if the deflection extends to the cribriform plate go to it, because you will not have a meningitis. The flow of the lymph is down and outward, instead of meningeal-ward.

DR. M. H. KREBS (Huntington): It has been my experience that the long contact of a tampon within the nose, say 24 hours, is very objectionable. In the first place, that tampon, although put in dry, collects a good deal of mucus, and I judge that Dr. Brown has reference to the compressed tampon which expands with the addition of either water, mucus or blood. It has a great tendency to press on both sides, and I have very seldom seen a flap, after the tampon was taken out, which did not show evidences of pressure. The removal of the tampon after 24 hours *in situ* always means more or less

tearing of the wound. As a rule, I perform the operation practically the same as the essayist has shown, but I do not leave my pack in longer than 12 hours. After operating I leave the pack in six hours. At the end of that time I change it and leave the second pack in over night—twelve hours, and remove it the next day. I do not repack. I do not use the dry pack any longer, but use small pledgets of gauze moistened with an antiseptic oily preparation. I find I get better results in that way.

I fully agree with Dr. Kearby that operations upon nurses or doctors or others who are in hospitals or institutions, are sometimes attended with unfortunate results.

DR. C. NORMAN HOWARD (Warsaw): One of the discussants mentioned a little operative detail which I picked up some years ago and would like to emphasize. That is, just as the submucous resection is finished, the making of an incision with the knife for about one to one and a half inches along the floor of the mucous membrane of the septum out onto the floor of the nares. I believe this cut is better made on the same side as the original incision, as one can see more easily and there is less danger of mutilating the other mucous membrane than if the cut is made through the latter.

This inferior incision heals up kindly and in the meantime permits immediate drainage and lessens the chance of a large blood clot forming between the two mucous membranes of the septum.

DR. KARL T. BROWN (Muncie): With reference to what Dr. Tomlin said relative to replacement of cartilage, I would not leave the impression with him that I always put in the cartilage after taking it out, but as a rule I do. I take exception to what Dr. Hollis said as to infection following replacement. I cannot recall a case where I had any bad results in so doing. I generally get union.

As to children, I stated in my paper that I would operate on children under exceptional circumstances.

I agree with Dr. Kearby in regard to operating on cases coming from hospitals. I think that is a point well taken. Especially was that impressed upon me during my term of service in the army, and more particularly after the armistice, when we got into Germany, where we were getting bad results. We did not know why we were getting those infectious results. The cases were being sent in to us from all over the area, and generally they came from the billets where they were located. The troops were billeted in German houses, and almost invariably we could trace it back to some kind of infection that was prevailing in the district at the time, whereas if we had kept them, as

Dr. Kearby said, for ten days before operating, we would have gotten away from that.

As to Dr. Adams' escape valve, I have never tried it, but it strikes me as worthy of consideration.

THE PREVENTION OF DIPHTHERIA*

E. G. FREYERMUTH, M.D.

HEALTH OFFICER

SOUTH BEND, INDIANA

The vital statistics for South Bend for 1920 show some interesting, instructive and alarming things about diphtheria. There were eighty cases of the disease reported that year. Seventy of these were in children under twelve years of age, verifying the observation made by health authorities that the greatest susceptibility to diphtheria lies in children under the teens. There would have been a greater incidence of the disease but for the timely use of antitoxin as a prophylactic measure. So far as our investigations could determine, almost every child exposed to the disease was immediately immunized. One physician, however, immunized only those whom he thought were susceptible. If a child presented a robust appearance, with normal condition of the throat, he gave it no attention. But he missed his guess in one instance when a little girl he "gave no attention" after being exposed, contracted the disease and died. It is safe to assume he will play safe in the future.

A sick child was sent home from one of our public schools in the fall. The next day it was quarantined for diphtheria. The school nurse, on her own initiative, immediately examined every other pupil in the sick one's room, obtaining swabs from each throat for laboratory determination. The following day two of the youngsters were sent home and placed under quarantine on the report of our bacteriologist that their throats were infected with Klebs-Loeffler bacilli. This raised a storm of protest from two families because the children "were not sick," but the quarantine was maintained until two negative cultures on successive days had been obtained, because the affected ones were diphtheria carriers and a menace to others. Here was a potential epidemic "nipped in the bud" by the prompt and intelligent action of a trained nurse. Can any stronger argument than this service rendered the community be offered concerning the value of the school nurse? This is only one instance showing her worth. Many more could be cited.

South Bend is fortunate in having a progressive physician, Dr. R. B. Dugdale, on its school

*Read before the Health Officers' School, State Board of Health, May 11, 1921.

board. Through his instrumentality our public schools have been supplied, not only with nurses, but also with equipment, in some of the buildings, for free dental service to the pupils from indigent families. More are in prospect.

As a rule the diagnosis of diphtheria is made on the bacteriological findings of swabs sent to our laboratory by the physician in charge of the case. But we have found that it is not always safe to depend on the laboratory for the diagnosis. One of our fatal laryngeal cases had its chances for recovery lost because the first swab returned a negative culture which caused a delay in the administration of antitoxin. A second culture on the following day turned out positive, but antitoxin was then of no avail. It is my practice and advice to the profession to take no chances with croup in a child, but to resort at once to anti-toxin. If the patient recovers, one can feel he has saved another life. If it dies, one can feel he has done all science could offer.

There were ten deaths from diphtheria during the year, making a mortality of 12.25 percent. All but one, who was 13, were under ten years of age, harmonizing with published statistics showing that 90 percent of the fatalities from diphtheria occur in children under ten. With a single exception, a little tot moribund when the doctor first saw it, dead before the remedy could be brought to the bedside, all had received antitoxin some time during the course of the disease. Sixty of the eighty cases and two of the ten deaths were reported before December 1st, making a death rate of one-third of one percent for the first eleven months of the year. In December the disease appeared in a malignant form, causing a mortality of 40 percent (eight deaths in twenty cases) and vividly reminded me of the scourge diphtheria was in pre-antitoxin days. Two of the little folks died within 48 hours of the onset of the disease. Two died in one family after a somewhat protracted illness. (Last month, April, our mortality from diphtheria was 60 percent—3 deaths in 5 cases). The possibility of a recurrence of such a mortality on a larger scale gave me, as the guardian of the health of the children of my city, no little concern and much thought.

About this time Mr. Ward, of the Lederle Co., interested me in the Schick test and toxin-antitoxin mixture, which led to correspondence with the New York City Board of Health and finally to a program for a diphtheria prevention campaign in South Bend and vicinity. The program included addresses by Dr. A. Zingher, Assistant Director of the Research Laboratory of the Department of Health of the City of New York, to the medical profession in the morning, to the business men at the noon

luncheon of the Chamber of Commerce, and to a mass meeting in the evening. No city funds being available for the work, our merchants, having the matter laid before them, heartily commended and agreed to finance the scheme. The press took kindly to the proposition and gave it much publicity. The Chamber of Commerce offered the use of its building for the meetings and gave every assistance possible. Circular letters were sent to all the doctors in the county, to the business men of the city, and to 6,000 parents to attend these meetings.

The morning session, an unusual time for doctors to meet, was attended from far and near, by a large number of the profession who were greatly interested in what they heard and saw of the Schick test and its reactions in the scores of children and some adults present who had been "Schicked" for the occasion. In appreciation of his work the physicians later sent Dr. Zingher a handsome "South Bend Watch", suitably engraved, and chain as a memento of his visit to our city. The business men's luncheon had its usual large attendance and all gave the speaker the closest attention. Even yet favorable comment is heard of that talk. The evening meeting, not as large as was expected because of other attractions, but comfortably filling a large auditorium, developed great interest in the doctor's remarks and statistics, and elicited many questions for the speaker's answer. At the close of the meeting many availed themselves of the opportunity to be Schick tested.

Every day for a week before the doctor's arrival the Schick test was applied to a group of children by Drs. C. S. Bosenbury, Milo Miller and M. D. Pelz, pediatricians on the staff of the Children's Free Dispensary, and Dr. E. G. Kyte, of Eli Lilly & Co., for demonstration by Dr. Zingher of the various stages of the Schick reactions. The tests were made with preparations from the New York City Board of Health, and the Eli Lilly & Co. Laboratories. The former is recognized as the standard, but I was glad to note that the latter, because it is an Indiana product, gave equally as good results. This demonstration proved to be the most important and profitable feature of the program in that it presented an opportunity to observe the various reactions of the Schick test which had not been seen before by most of the physicians present.

The outstanding features of Dr. Zingher's addresses were: the natural immunity to diphtheria possessed by a small percent of children, the value of Schick's test in the determination of susceptibility or immunity to the disease, and the certainty of establishing immunity in practically all with the toxin-antitoxin mixture. The

central topic of the talks was the Schick test. Great stress was laid on the point that the value of the test depended upon its proper application with a reliable preparation and correct interpretation of the reactions.

The technique of the application of the test is simple when once acquired, but not so simple as it appears to the novice. The fluid must be placed between the layers of the skin, not under it. Otherwise the test will be valueless, even with a standard preparation. The appearance of a white blister-like elevation at the point of injection is evidence of correct technique. I can recall no simple procedure requiring such close attention to details as the application of this invaluable test. Perfectly done its indications are unquestionable. Improperly applied it may lead to false security and disaster, place the test in bad repute, or bring censure upon the physician. A good syringe with short, inflexible needle will greatly facilitate the procedure of applying the test. Dr. Zingher recommends the "Record" syringe with 26 gauge quarter inch needle as the best for the purpose.

A surprisingly large number of positive reactions were found among the adults who took the test during the campaign. Among these were several physicians and nurses who have since taken the toxin-antitoxin treatment. It occurs to me to suggest to the fraternity and its nurse co-workers that they avail themselves of this protection, since they so often come in such close contact with the disease. "Physician, heal thyself," applies here. One of our prominent practitioners, a number of years ago, lost an eye through diphtheritic infection from a patient who coughed into his face while inspecting its throat. A stalwart and burly negro showed a "positive". Being greatly perturbed over the matter he approached Dr. Zingher with "Boss, wat's I gwine to do now since I's done gone wrong?" He later received three "shots" of the toxin-antitoxin mixture and is now as happy as usual.

The program for the elimination of diphtheria from our city is only just begun. It is to be a continuous campaign, with propaganda and other methods, until parents awake to a realization that it is not far from criminal carelessness to have their children die of diphtheria.

In conclusion let me repeat what I said, among other things, to the physicians of South Bend in a late circular letter along this line:

"Use the Schick test often, especially in children under twelve. Be sure of the reliability of the preparation. Look for the white blister-like elevation at point of injection. Understand the reactions—if positive urge toxin-antitoxin."

COEXISTING CHOLELITHIASIS AND KIDNEY STONE OF PROBABLE TUBERCULOUS ORIGIN

CASE REPORT

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Recent medical literature has dwelt at length upon the difficulties which often arise in the diagnosis of stone in the kidney, particularly the right, and the differentiation of this condition from cholelithiasis. Infrequently the two occur simultaneously, as shown by Bracht¹, and in such cases the utmost nicety of diagnosis is required, particularly if the clinical symptoms of one or both are atypical. Presentation of such a case, together with an admission of failure in its recognition, is offered.

According to the best authorities on the subject, actual stone formation is rare in the tuberculous kidney. Braasch² and Olsen² are of the opinion that when it does occur it is generally a phosphatic stone, formed in a localized abscess, with necrosis and secondary infection. As to the incidence of tuberculous cholecystitis, it is practically an unknown quantity. Korte³ met with an example and furnishes references to six other cases which have been described. Positive proof of the tuberculous origin of the lesions in the case presently described is lacking, although every circumstance connected with it renders such a conclusion highly probable.

History. Mrs. J. A., a widow, aged 41 years, appeared for examination on Nov. 12, 1920, complaining of certain mild gastrointestinal disturbance and vague nervous symptoms. Her physician, Dr. C. W. Aitken, of Flemingsburg, Ky., had made a diagnosis of gallstones and had advised her to operation.

The family history was negative. At the age of thirteen she began to have pain in the right knee and thigh, with fever and loss of weight, and the development of a well-marked case of tuberculous hip-joint disease. There ensued suppuration, sinus formation, multiple incisions for the evacuation of the pus, with finally apparent cure, so that, at the age of twenty the head of the femur and a portion of the acetabulum had been destroyed, there was a marked spinal curvature, and the patient has since walked only with the aid of a crutch. At no time, during or since this illness, have repeated examinations by numerous physicians disclosed the presence of pulmonary or other forms of tuberculosis.

(1) Braasch, W. F., *Clinical Data on Renal Lithiasis*, Jour. Lancet., Oct. 15, 1913. pp. 561-564.

(2) Braasch, W. F., and Olsen, F. A., *Radiographic Diagnosis of Renal Tuberculosis*, Surg. Gyn. and Obst., 1919, xxviii.

(3) Korte, Prof. W., *Beitrage zur Chirurgie der Gallenwege und der Leber*, Berlin, 1905.

The patient is a seamstress by trade, and by inclination and occupation has always been a person of sedentary habits. She has never had any form of acute infectious disease other than measles and mumps in childhood. She has been troubled with chronic constipation for the past fifteen years, but aside from this has been comparatively healthy. She has never been pregnant and her menstruation is always normal.

About four months since her constipation grew worse, insomnia and nervousness developed apace and she complained of slight pains in the upper abdomen, particularly on the right side. The pain seemed to bear no relation to meals or to the character of the food. Fever, chills, nausea and vomiting, loss of weight and appetite, genito-urinary and other disturbances have all been absent. The abdominal pain has never been of a severe or continuous character.

Examination, Nov. 12, 1920: The patient is apparently well developed and nourished. Temperature, 99.2 deg. F. Pulse, 80. The lungs and heart are negative. There is a marked kypho-scoliosis of the lumbar spine. The abdomen is regular in outline, soft and not distended. Deep pressure below the right costal margin is painful. No other points of tenderness or other abnormalities could be discovered. Urinalysis of a twenty-four hour specimen showed an acid reaction to litmus, spec. grav. 1.020, albumin faintly positive, little sediment and no sugar. Microscopic examination of a centrifugalized specimen revealed only a few cells of renal epithelium and leucocytes, with an occasional red blood cell. Blood pressure was 140 systolic, 90 diastolic. The hemoglobin was 90 percent and the blood count normal.

X-ray examination of the gall-bladder region on Nov. 13th, by Drs. A. M. Cole and R. C. Beeler of Indianapolis, showed the shadow of a very large, kidney-shaped stone in the right hypochondriac region, with some smaller stone shadows in the same vicinity. Stereoscopic plates were examined, which apparently showed the stones to lie anterior to the plane of the spine. This would point very strongly to gall-stones, unless the kidney were floating, as would also the fact that the shadows were above the level of the twelfth rib. The spinal curvature might also be responsible for some confusion in regard to the position of the stones. Altogether, the roentgenologists were unable to determine whether the shadows were caused by stones in the kidney or gall-bladder, or both.

Operation, Nov. 15, 1920. Under nitrous-oxid-oxygen-ether anesthesia the abdomen was opened by Dr. J. C. Sexton with a five inch incision in the right semi-lunar line. A few old adhesions in the gall-bladder region were separated and the organ exposed. It appeared

smaller than normal, with greatly thickened walls, yet distended with fluid. Upon incision there was drained about 20cc. of a glairy colloid fluid, together with three or four stones the size of French peas. Another stone, somewhat larger, was found impinged in the neck of the bladder, blocking completely the cystic duct. The stones were light and very friable, and were composed, evidently, of the phosphates and carbonates of calcium. The gall-bladder was amputated at the point of impaction of the stone and sutured with No. 1, plain catgut. A small rubber drain was left in the region of the stump.

Palpation of the right kidney made evident a large stone. The posterior peritoneum was incised and the kidney easily delivered into view. When cut the capsule stripped readily. Upon incision into the substance the stone was revealed and was removed easily without breaking into fragments. It weighed 9.4 grams and was apparently of similar composition to those found in the gall-bladder. The kidney itself showed no gross pathology, and in spite of the probable tuberculous origin of the stone, its removal was deemed inadvisable. The kidney substance and capsule were sutured with double, plain, No. 1 catgut and the posterior peritoneum was closed, leaving a small caliber drainage tube in the perirenal space. The peritoneum was closed with catgut and the muscles and fascia united with catgut and with figure-of-eight sutures of silk-worm gut.

Outcome. The postoperative progress was uneventful. The patient was somewhat icteric for several days following. The drainage tubes were allowed to remain 48 hours. There was considerable hematuria for 36 hours, but this gradually subsided until the eighteenth day, when the urine became clear. The stitches were removed on the tenth day, the patient was allowed to sit up on the eighteenth and left the hospital a week later. Subsequent reports from her have been altogether favorable.

The following features of the case seem worthy of reiteration:

1. That the clinical symptoms were unreliable, both for kidney and gall-bladder disease.
2. That the usual urinary findings of renal disease were absent.
3. That the roentgenographic diagnosis was difficult, especially in regard to the identification of the renal shadow.
4. That the tuberculous history of the patient, the nature and composition of the stones and the comparative mildness of the symptoms, renders the diagnosis of tuberculous lithiasis the most probable, in spite of the rare occurrence of such condition in these sites.

Braasch⁴ and Roberts⁵ have emphasized the differential characteristics of extra- and intra-renal stone shadows, yet such distinguishing features were very much confused in this case.

It is probable that a pre-operative diagnosis might have been made in this case by use of the more refined methods described by Braasch⁴, such as pyelography and tests of renal function, together with clinical, radiographic and cystoscopic data.

(4) Braasch, W. F., Recent Advance in the Diagnosis of Surgical Lesions of the Kidney. Minn. Med. 1920, iii., pp. 112-118.

(5) Roberts, Dudley, The Roentgenologic Diagnosis of Gall-Bladder Lesions. Jour. A. M. A. 1920, lxvi, pp. 561-564.

TRAUMATIC FRONTAL SINUS ABSCESS*

(An Acute Exacerbation of an Old Sinusitis)

CASE REPORT

DANIEL W. LAYMAN, M.D.

INDIANAPOLIS, INDIANA

On December 3rd I was called by the family physician, Dr. Spencer, to see a patient at his home. The case was thought to be a frontal sinus disease. The patient was a man twenty-six years of age, a railroad mechanic by occupation. He stated that the present attack started on November 30th with severe headache; the pain being worse over the left eye, radiating over the temporal region. The eye became swollen and in forty-eight hours was closed. He had a few chills and fever as recorded by Dr. Spencer between 102½ and 103. No history of any nasal discharge since attack commenced. He gave a history of having had two similar attacks last winter, one in December and the other in February, but not so pronounced.

Examination. The left eye was markedly swollen, upper eyelid edematous and closed; marked swelling, induration and redness extended over left frontal and temporal regions. The area was very tender on pressure, especially just above supra orbital ridge, both internal and external to the supra orbital notch. I noticed a scar in the temporal region, well up above ear and slightly anterior. I questioned patient regarding scar and he said it was the result of an automobile accident in August, 1920. He was struck by an automobile and thrown about 15 feet, his head striking the hard pavement. He was taken to one of our best hospitals where he was treated by the hospital for a scalp wound in temporal region and contusion of left eye. He was discharged from the hospital the evening of the same day. No x-ray picture was taken at that time. The eye became very much swollen and also the area over the

outer part of the frontal and temporal region became swollen and inflamed. The swelling over the eye continued for two (2) weeks, but the swelling over the wounded area subsided in a few days, and there was no further trouble until the present attack. On close questioning, he said that a little discharge came from the lower angle of the temporal wound, two weeks ago, about the middle of November. No discharge noticed in nose; infundibulum appeared blocked.

He was admitted to the hospital with a diagnosis of frontal sinus disease. X-ray showed large sinuses both sides; left side double; slight shadow or haziness over the left frontal. Next day, Dec. 4th, an intra-nasal operation was performed. This was done in order to see whether or not the intense swelling, induration and tenderness over the frontal and temporal regions and the orbital cellulitis would be reduced by establishing nasal drainage from the frontal sinus. The Mosher operation was performed; the anterior part of the ethmoid labyrinth was entered with a sharp curette. The curettement continued through this opening both forward then downward and backward until naso-frontal duct was enlarged. A hyperplastic ethmoiditis was encountered. A great deal of pus drained from the frontal sinus, which was irrigated with normal saline solution. The condition greatly improved each day and in three days' time the swelling and tenderness had disappeared to such an extent that the supra orbital ridge could be felt. For the first time it was noticed that there was an irregularity in the ridge, external to the supra orbital notch. On pressure at this point, tenderness was elicited and when this area was depressed with the finger, the patient complained of an increased amount of discharge in the nose.

On December 7th, the temperature having remained under 100 F., it was decided to do an external frontal sinus operation. On December 8th the Lothrop operation was contemplated, but after exposing a large area of the frontal bone it was abandoned because of the surgical findings. This exposure was made by an incision along the full extent of the supra orbital ridge, down through the periosteum. Pus was discovered oozing through a linear fracture beginning at the outer three-fourths of the supra orbital ridge and extending upwards one-half inch through the outer wall of the frontal bone, nicking the arch and probably involving, to a slight extent, the orbital plate of the frontal. This, undoubtedly, caused the very extensive orbital cellulitis. The external wall of the sinus was removed with gauge and bone forceps, the fractured part completely exenterated; pus and old granulation tissue removed from the sinus. The opening into the nose was enlarged with

* (Presented at The Indianapolis Medical Society)

rasps and cigarette drainage was inserted from the frontal sinus into the nose and wound sewed up, leaving a similar external drain at the inner angle of the external wound. Wet dressing of boric acid solution applied and kept wet for two to three days; the nose was sprayed daily with adrenalin solution. The patient showed steady improvement from day to day and was discharged from the hospital Dec. 16th. The frontal sinus abscess healed nicely. However, an orbital abscess developed and required three incisions at different times.

The case is of interest because it can be considered as a compound fracture of the outer plate of the frontal bone; or one, at least, that became compound as soon as the intra sinus communication was established. Because roentgenography failed to bring out the fracture—this was probably due to the fact that a long time had elapsed before the plate was made—the osteomyelitis had developed to such an extent that it obscured the line. The case emphasizes the fact that in all head injuries it is important to make roentgen plates and make them early.

The case is of interest because the patient seemed to lay greater emphasis on the old history of nasal trouble and frontal sinus disease than the injury received by the automobile—in fact, the injury was not considered of much importance by me until after the intra-nasal operation, which brought about a subsidence of the inflammation, whereby more knowledge of the external condition was obtained. The history as given prejudiced me to first establish intra-nasal drainage. Fortunately, this procedure turned out for the best, as it allowed the angry inflammatory symptoms, including the orbital cellulitis, to subside. Without such a history or with a little more emphasis on the injury, especially if the pathology of the injury had been suspected, I probably would have performed the external operation without the intra-nasal drainage. I am sure, however, if I had done so, the operation would have been followed by some reaction and greater sloughing. In all probability a single small cigarette drain would not have drained the abscess cavity—one would have had to deal with a large, open wound. The question may be properly asked:

“When given an old history of frontal sinus symptoms, is it a better surgical procedure to treat a traumatic frontal sinus abscess by first establishing drainage through the nose?”

Subsequent History. Patient returned with recurrence of orbital cellulitis which developed into an abscess. Over a period of a few weeks, several of these abscesses were opened and drained. They were usually confined to the outer aspect of the orbit, about on a line with

the fracture. In spite of careful surgical treatment of these orbital abscesses the frontal sinus became reinfected and on March 1st it was necessary to do a secondary operation of the frontal. The old wound was reopened, frontal sinus thoroughly curetted and the naso-frontal duct enlarged. The old sinuses or fistulous tracts in the orbital area were thoroughly curetted. The external wound was sutured and healed by primary union. Internal treatment of the nose was continued for a few weeks. At present, May 10th, no discharge from frontal sinus and orbital and frontal area appear healed. The area feels hard and firm and no tenderness. I am indebted to Dr. Joel Whitaker with whom I consulted regarding the orbital abscesses and who assisted me in the secondary operation.

IMPRESSIONS FROM ONE HUNDRED MASTOID OPERATIONS

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Mastoiditis is a much more common complication of otitis media and the acute infectious fevers than usually is believed. In rare cases it occurs without primary infection of the middle ear. The recent use of the x-ray in diagnosis of this condition proves its existence to some extent in all cases of otitis media. At times only a plastic exudate occurs in the mastoid cells. This exudate many times is absorbed, with complete recovery. At times these cells are filled with straw colored fluid under pressure.

Mastoiditis occurs as a complication most frequently with measles and influenza. It also is found commonly with scarlet fever, diphtheria, pneumonia, rhinitis acute, chronic sinus disease, syphilis and mumps in about the order named.

Contrary to textbook descriptions, the finding of ear discharge, bulging of the drum membrane, pouching of the posterior superior external canal wall, tenderness over the mastoid with edema of the superficial tissues, separately and collectively, may not be present. Perisinus disease, septicemia and pus in the mastoid cells may not be characterized by pain. Two cases I have seen recently where hemolytic streptococci were found in the culture in the mastoid pus, showed no pain and no fever. The x-ray is invaluable in diagnosis, as well as in deciding when to operate. The increase in percentage of polymorphonuclear leukocytes, coupled with positive x-ray findings, in a case of otitis media acute which fails to subside within two weeks, is an indication for early operation in the absence of

*Dr. Green formerly resided at Albion, Indiana. He enlisted in the navy when the United States entered the World War, and at the close of the war re-enlisted. Recently he has been assigned to sea duty.

nocturnal pain and other classical symptoms and physical findings.

Many cases of influenza and measles show absorption of bone weeks and months after otitis media has entirely subsided. The patients complain of indefinite discomfort about the ear, with loss of weight, bronchitis and general malaise. The cells will be found to contain pus or pus with granulations. The blood shows a definite secondary anemia.

Early operation usually prevents the picture of chronic fetid aural discharge, loss of drum membrane and ossicles, with middle ear or internal ear deafness, also the complications of acute mastoiditis such as perisinus abscess, sinus thrombosis, septicemia, brain abscess, extradural abscess and lung abscess.

When everything has been considered, the surgeon's first impression as to the necessity for operation is usually correct. Procrastination has no place in the surgical treatment of mastoiditis.

In the presence of heart or lung complications it is safe and feasible to operate with local anesthesia in combination with an ounce or two of whiskey, and morphine in one-fourth grain dose. There is no more shock than under ether or other general anesthesia. The post-operative temperature rarely rises over one degree. Operation consumes no more time under local than under general anesthesia and is without pain to the patient. Procain (novocain) in one percent solution, with adrenalin, is acceptable as a local anesthetic.

The operative technic of choice in all cases of acute mastoiditis uncomplicated by perisinus disease, sinus thrombosis and brain lesions is as follows: Thoroughly curette all mastoid cells and open wide the mastoid antrum; then douche with peroxide of hydrogen or 3½ percent tincture of iodine; remove all fragments of bone and soft tissue; incise the membrana tympani freely; insert a cigarette drain into the mastoid antrum by the shortest route from incision to antrum; allow the blood to fill the wound; close the periosteum with two or three interrupted catgut sutures and the skin with Michel clips; apply a dry dressing of fluffed gauze. The blood clot thus formed in the mastoid wound and middle ear usually sterilizes the diseased mastoid and middle ear, even in the presence of hemolytic streptococci. The drains may be removed on the fourth day and the clips on the seventh.

Usually, or in about 66 percent of the cases which have been carefully and thoroughly operated, the wound heals by primary intention, leaving a linear scar without depression. The patient is saved the suffering of weeks of painful dressings required by the antiquated method of packing the mastoid with gauze daily, as has been the vogue for several years. If the wound

should not be sterilized by the blood clot, nothing is lost and the wound will heal more quickly than with the packing operation and with a much less unsightly scar. The hearing usually returns to normal within two to four weeks. The patient is able to resume his usual labors in two weeks instead of six to twelve weeks. Much time and suffering as well as expense are saved in dressings.

In order to succeed in the blood clot operation, one must be sure that he has reached all infected cells and thoroughly cleaned them out, and that his asepsis is perfect. Naturally it is advantageous to operate early, before perisinus disease, sinus thrombosis or other complications have developed.

The blood clot operation is not a new operation but one which has been brought out of the ash can of disuse and slightly modified.

A DOCTORS' INFORMATION EXCHANGE

A. J. DE LONG

(In charge Doctors' Information
Exchange at Lafayette, Indiana)

Before discussing the unique combination of circumstances which has made a Doctors' Information Exchange a possibility in a city of less than thirty thousand it might be well to explain what is meant by this service. Just what is its purpose? How is it maintained and operated?

The fundamental purpose of a Doctors' Information Exchange is to supply a permanent telephone service for each physician. Especially during evenings and on Sundays there are times when a doctor's telephones are unattended. Ordinarily a patient might call intermittently for several hours but could receive no answer until either the doctor or his family returned. At times this obvious lapse in service might be annoying, sometimes it would be alarming, and again it might prove fatal. Any number of reasons might account for a physician's telephones being unattended. In these instances, when a lapse in service would otherwise occur, the Doctors' Information Exchange is available to answer all calls and give the matter immediate attention. This arrangement gives the physician greater freedom. He and his family can go at will, knowing that no call need go unanswered. Whenever a doctor leaves his telephones without attendance it is his duty to report his whereabouts to the Exchange. On the other hand, the public is directed to communicate with this Exchange should no one answer from the regular telephone numbers. In this cooperative manner the absence of any physician

can usually be explained. When a member reports himself at his club or at any place accessible by telephone it is an easy matter to direct calls to this number. If the doctor is not within telephone reach an effort is made to retain the call. In case the patient cannot wait, or should the physician be away for too long a time, it is preferable that the matter be directed to an associate; that is to say, to another doctor with whom arrangement has been made to temporarily care for this member's patients. Should the patient wish to summon a physician of his own choice rather than the one suggested he is free to do so. In either case the matter is reported, as the absent party will be interested to know of the call.

This service does not aim to do away with office girls. It is primarily intended to supplement prevalent methods. Efficiency rather than economy is the object. Nevertheless it might be admitted that in many instances this system has made an office girl unnecessary. The fact that this arrangement leaves no telephone calls unanswered does not imply that a doctor cannot seek rest or attend amusement without being liable to disturbance. The Exchange is strictly a confidential agency. What the physician says goes. Quite frequently a member will ask not to be disturbed unless it is absolutely necessary. By questioning a patient one can usually ascertain if the need is sufficient to call the doctor away from his interest.

An Exchange is also subject to inquiries of a general nature. Questions regarding office hours are perhaps most numerous. All accidents and calls for medical assistance are given immediate attention and are handled quicker than would be the case if calls were made promiscuously. The various departments of health, the coroner, the disposition of charity patients, etc., must be explained. Information will either be given or obtained.

The purpose and scope of this service now defined there comes the matter of operation and maintenance. The essentials of this system consist of a telephone (business line), an operator in charge all the time, the cooperation of the physicians, and the publicity. Inasmuch as the operation is exclusively telephone work, no public office is needed. Indeed, a private home is fully adequate. Two telephone lines are better than one for the simple reason that when calling out, incoming messages are delayed. The writer uses one line exclusively for incoming calls and retains the other for outgoing messages.

It will be found that the operator or person in charge of an Exchange is really the hub of the system. He (or she) must have patience, be willing and persistent, and always ready to safeguard the interest of any physician. Should

a member who neglects to report his whereabouts be needed the operator must endeavor to find him. By referring to records of previous reports this is not a difficult undertaking. Human beings unconsciously move in the same circle. I have had doctors ask in surprise: "How did you know I was here?" To show a phase of the work I will cite one instance: It was a case of obstetrics ready for attention and the doctor had neglected to leave a report. I assured the party I would locate their physician immediately. First I called the office girl at her home, and fortunately she remembered the address to which the doctor had gone. But investigation showed no telephone at this number. Were my efforts in vain? With the aid of "central" I was able to call next door to the address. They in turn were kind enough to call the doctor to the telephone.

The reports given by the members of the Exchange make an interesting record. You soon learn a doctor's friends, his clubs, his politics, his religion, his favorite sports, and his other interests. You know where he sits in the theater and the kind of shows he likes best.

A Doctors' Information Exchange is entirely new to a community upon its inception. Before it can be successfully operated the public must understand its purpose. The people need to be educated to the idea. This was the greatest difficulty with which we had to contend here in Lafayette. There was no precedent to follow. To give the matter publicity newspaper advertisements were used but did not produce the desired result. Office display cards helped. The plan that did finally work is set forth in the clipping below which has been taken from the local telephone directory:

11991	Armstrong, C. W.	Res.	923 N. 15th St.
7111	Armstrong, G. V.	Res.	2017 1/2 N. 16th St.
336	Arnett, Dr. A. C.	Off.	716-18 LaF. Life Bdg
480	Should no one answer from 336 or 3600 then call 480.		
3600	Arnett, Dr. A. C.	Res.	516 S. 7th St.
2346	Arnett, Ed. R.	Res.	100 E. Wood St. W. L.
6287	Arnold, A. G.	Garage	Dayton, Ind.

This notice advertises the proposition permanently and places the publicity at the finger tips of anybody who looks for a doctor's number. The line of wording is used in connection with each physician's name, and the listing appears thirty-eight times in the text of the directory.

It is my candid belief that Lafayette is the only city of its size that maintains an exchange of this nature. The large city with its scores of physicians can easily support an Exchange. But the smaller city cannot pay for an elaborate system. What has kept the service away from these places is the belief that the enterprise is not practical outside of the larger cities. Granting that the undertaking has been found practical in one small community, will not the plan

be of interest to a great many other places? Perhaps many cities have within their surroundings a similar solution. At least it ought to be of general interest to know how we have put the idea across.

To fully explain how an Exchange has been made possible here I must get personal. Five years ago an illness left the writer an invalid and practically a shut-in. At the time I initiated the Doctors' Information Exchange I had no income outside of a small magazine subscription business. My telephone was always within reach, having installed same for my magazine work. In other words, I was confined to my home, with a telephone already installed, and greatly in need of something to do. What circumstances could be more favorable for the establishment of an Exchange? It was not only convenient for me to always be on the job but rather a necessity.

An arrangement of this nature requires the services of but one person, and consequently there is but one salary to pay. This amount is figured pro rata and might be estimated at the cost of a good office girl. Unless a person is confined from some other cause or circumstance he would not want this work at any price, as it would demand too much. The biggest requirement for a one-man proposition is the matter of confinement. The work itself is very interesting.

Some may think this solution more unique than typical; that what exists here might not be found elsewhere. There is no foundation to this argument. Every community has its shut-ins and elderly people. In this city there are persons who will gladly take up the work should I decide to devote my time entirely to other interests. To many it would be a veritable god-send to have something worth while to do. I know that the work came mighty welcome to me.

In this city the Exchange has been a success in every way. The physicians have repeatedly commended the service, the public is appreciative, and there have been inquiries from other places. Personally I am pleased with the enterprise. The undertaking renewed my interest in life when it had waned considerably. With the work my health improved, and through the publicity gained by this connection, my other business has prospered. In fact we have all gained something by the adventure.

Herewith are reproduced the application for the service and the card used in members' offices:

DOCTORS' INFORMATION EXCHANGE
Application Blanks

Doctor: Dr. John R. Smith.
Office phone: 723. Res. Phone: 722. Office-girl's
Phone: 1023 (Res).
Office Hours (Day): 1 to 4 P. M. (Evening): Mon.,
Wed., Sat. 7 to 8 P. M.
Sunday Office Hours: By appointment only.
Home Hospital Hours: 10 to 11 A. M.
St. Elizabeth: 9 to 10 A. M.

Regular Calling Hours: 8 to 9 A. M., 11 to 12 A. M.,
4 to 6 P. M.
At Home (Res.): 329 Oakwood Boul. Tel. 722.
Remarks: Club 79, Country Club 130, Church 4323.
EMERGENCY: If I cannot immediately respond to
an emergency call please notify the following
physician (inform me of such calls as well as
telling other doctors that same is MY call):
Doctor: Dr. Wm. Brown or Dr. Chas. Jones.

INSTRUCTIONS: Whenever a doctor leaves the
above routine he should call exchange and place
such information.

Membership fee is one dollar (this assessment is
to defray expense involved in installing business
phone, advertising, etc.). Service fee is two dollars
a month, payable every three months, and due the
15th of the first month. No change in fee can be
made unless authorized by Medical Association.

This application properly filled and returned with
membership fee is an agreement. Service will be
opened at once.

MEMBER

DOCTORS' INFORMATION EXCHANGE

Please Notice

Whenever the doctor is not in his office, or at other
times does not answer at his regular telephone num-
bers, call 480 for information regarding his where-
abouts, when he will return, to leave your number,
etc. This is a permanent telephone call, and an
operator is in charge at all times.

Doctors' Information Exchange

**THE REMOVAL OF FOREIGN BODIES
FROM THE AIR AND FOOD
PASSAGES***

LAFAYETTE PAGE, M.D.

INDIANAPOLIS, INDIANA

Today every laryngologist is expected to be able to remove foreign bodies not only from the larynx, but also from the trachea, bronchi and esophagus. Many of you who are familiar with the brilliant achievements of Chevalier Jackson through journal reports, or who have been so fortunate as to witness his marvellous technique in bronchoscopy, scarcely realize the expenditure of time, labor and money necessary to attain such perfection. It seems so easy for Paderewski to render a great masterpiece of music like the Emperor Concerto, of Beethoven, that we are apt to forget the study and labor of years necessary for even his splendid genius to produce such art. Perhaps there is no surgical procedure in which every detail of technique is so important and perfectly trained assistants are so essential, combined with constant practice on the part of the operator, as in the removal of foreign bodies from the bronchi and esophagus.

We should not forget that the bronchoscope and esophagoscope are dangerous instruments in the hands of the inexperienced and those without a natural sense of caution. It is not an art that can be picked up in an emergency by any physician who happens to have purchased the outfit described in the books. A number of tragedies are on record, and many more unrecorded, of brutal efforts to remove foreign bodies from the esophagus and air passages without knowledge or experience. On the other hand, the danger is very slight and the fatalities are very rare in the use of these instruments

*Read before the Indianapolis Med. Society.

in the hands of the skillful and judicious, while the results in the saving of life are among the most frequent and dramatic in the field of surgery.

In the following cases I have tried to record the results of my limited experience in as brief a manner as possible.

OPAQUE FOREIGN BODIES:

Among the most frequent opaque foreign bodies aspirated into the air passages or swallowed into the food passage are pins of various kinds, including ordinary pins, needles, safety-pins, and stick-pins of great variety. Jackson regards the ordinary pin or needle lodged in one of the smaller bronchi near the periphery of the lung as the most difficult to find and remove of all forms of foreign bodies. The lung will tolerate the presence of this form of foreign body for a long time with less reaction than any other. A case is reported by Doctor Mosher of a nurse who had a metal clasp pin in her lung which had been there for five years without producing any other symptoms than an occasional cough. Attempts to remove this pin on two or three occasions were made, once by Killian and once by Jackson, but without success. Such cases are exceptional. Few are so fortunate as to escape pneumonia or abscess of the lung soon after aspiration of a foreign body, or later development of tubercular infection.

Jackson sums up the matter fairly when he says: "We do full justice to our patients when we tell them that while a foreign body may be coughed up, the chances of this are remote and it is dangerous to wait, and further, the difficulty of removal increases with each hour that the body is allowed to remain."

It is in locating this class of foreign body that the x-ray and fluoroscope afford us the greatest aid.

CASE REPORTS

Case I. A young lady nineteen years of age, while dressing to be married, aspirated into the trachea an ordinary pin which she was holding in her mouth. This was followed by violent spasms of coughing, some pain, and slight expectoration of blood. Three hours after, under cocaine anesthesia, bronchoscopic examination was made per oral, and the pin found sticking into the tracheal cartilage, point upward, just above the bifurcation. The pin was grasped as near the point as possible, pushed downward and outward and removed through the bronchoscope. There was no reaction or after-disturbance.

Case II. A boy thirteen years old aspirated a pin while attending school at Shortridge. He was brought to our clinic very much excited and frightened, with spasms of coughing and dyspnea. Ether was administered and bronchoscopic examination per oral made. An ordinary

pin was found, driven more than half its length into the tracheal cartilage about 10 c. m. below the cricoid cartilage. This was extracted, considerable force being necessary to dislodge it. Immediate recovery followed.

Case III. A young girl fifteen years of age, while picking her teeth with a blackheaded steel pin, flipped it into the throat and swallowed it. Efforts were made by the local physician to extract it by forceps without the use of an esophagoscope. He succeeded in grasping the pin, but in his efforts to remove it forced it into the vertebral column, and abandoned further effort. An x-ray examination was made, locating the pin sticking through the esophagus into the body of one of the vertebra. An esophagoscope was introduced and the pin found after diligent search. The esophageal membrane was edematous and very much traumatized due to the previous blind effort to extract. The pin was so tightly drawn into the bone, with the point upward, that great effort was required to dislodge it. In trying to dislodge it the pin was broken half in two and the head part was brought up with forceps. We finally secured the point. The patient was kept in bed on liquid diet for a few days. Some nausea persisted for a time but she made a perfect recovery.

Case IV. A child two years old who had swallowed an open safety-pin nine months prior to examination. A history of a peribronchial abscess was given. The abscess embarrassed the respiration to such an extent that life was despaired of, when the abscess broke, giving relief to the breathing. Examination with an esophagoscope revealed an open safety-pin in the esophagus just below the cricoid cartilage and sticking into the posterior wall of the trachea. The pin was grasped with forceps and dislodged, then closed with a wire snare loop and delivered. Uneventful recovery.

Case V. A child nine months of age, referred by Doctor Tindall of Greensburg, Indiana, swallowed an open safety-pin. The mother in her frantic efforts to grasp the pin had forced it well down below the level of the clavicle. This was followed by spasms of coughing and dyspnea. The child was brought to St. Vincent's Hospital where esophageal examination was made, the pin located and closed with a wire loop, after which removal was without difficulty. The patient left the hospital the next day in good condition.

Case VI. A boy fourteen years of age, referred by Dr. Kenneth Jeffries of Indianapolis. While holding a pin in the mouth it was aspirated into the lung from a blow on the back by a boy friend. Spasms of choking and coughing followed at once and lasted for a couple of hours. The symptoms had subsided by the

following day, except a slight cough. An x-ray examination was made, showing the pin, point upward, in the small lower lobe bronchus close to the heart. Bronchoscopic examination was made under ether anesthesia, the instrument introduced through the mouth. The middle and lower lobe bronchi were explored in a fruitless effort to find the pin. There was no reaction or unpleasant results following the examination except the disappointment of both family and physician. After a week of quiet it was decided to make another attempt to find and remove the pin with the aid of the fluoroscope. The lower and middle lobe bronchi were again explored, but without success. Having failed in the second effort, we advised his parents to take him to Dr. Chevalier Jackson at once, which they did. After keeping the patient in bed for ten days Doctor Jackson succeeded in finding and removing the pin.

REMOVAL OF TEETH

Considering the number of people who pass through the hands of the dentists for work on the teeth, and the great number of teeth extracted under gas anesthesia, it is surprising how few accidents we have from aspiration of teeth or dental instruments. It is a fine tribute to the skill and carefulness of the dental profession. However, accidents will sometimes occur in the hands of the most skillful operators.

Case VII. Mrs. K. L.; aged 46. This case was referred to me by Dr. J. A. MacDonald. History: Patient had had no previous illness that could be recalled. A few days after having some teeth extracted under gas anesthesia she developed a cough with pain in the right side, and a temperature of 103 degrees. Doctor MacDonald was called and made a diagnosis of foreign body in the lower lobe of the right lung. She was sent to the Methodist Hospital where Doctor Beeler made an x-ray examination, revealing the cuspid portion of a pivot tooth in the right lower lobe bronchus. On July 3, 1920, at four P. M., bronchoscopic examination was made per oral under ether anesthesia. The right lower lobe bronchus was found filled with pneumonic exudate which was drawn off with a suction tube. After some exploration the tooth was found tightly imbedded in the swollen bronchus, the biting end of the tooth presenting. We succeeded in grasping the tooth with different kinds of forceps, but could not hold the grasp on the polished porcelain wedge tight enough to dislodge. The effort was most discouraging, being conscious all the time that the life of our patient depended on the success of the operation. Realizing that a forcep could not be made to hold, and that it was not safe to prolong the effort, we decided to wait until

the following day, July 4th. In the meantime a blunt hook was made, with the hope of turning the tooth so that the pivot could be grasped. The patient showed no bad results from the first attempt at removal, so ether was again administered on July 4th, the tubes were cleared of exudate and the body located, aided by the fluoroscope in the hands of Doctor Beeler. The swollen tube was contracted with applications of adrenalin and we then succeeded in passing the hook to one side of the tooth, engaging the pivot and turning the tooth so that the pivot end could be grasped with forceps. Delivery was then easy. Convalescence began at once and ended in complete recovery.

Tooth plates, especially partial plates with prongs, have the unpleasant distinction, according to Mosher, of being the most difficult foreign bodies which the physician is called upon to remove from the esophagus. We have had two occasions to verify this statement.

Case VIII. A patient was referred to me from near Wabash, Indiana, a man 38 years of age, who had swallowed a poor-fitting tooth plate holding three incisor teeth. The plate lodged at first just beyond the cricoid cartilage, causing great pain and dyspnea. Efforts were made by the local physicians to force the plate into the stomach, using bougies and probangs. They succeeded in forcing it down through the esophagus close to the cardiac orifice of the stomach, where it remained for three months. The patient, unable to eat solid food, consulted a specialist in Lafayette, Indiana, who tried again to force the plate into the stomach. The patient said he was assured that the effort was successful and that he could eat solid food. After two meals of solid food he suffered great discomfort and difficulty in breathing. He then had an x-ray made which showed the location of the plate in the distended esophagus. An esophagoscope was introduced under ether anesthesia. A mass of partially decomposed food was removed and the tooth plate found embedded in the esophageal folds just above the cardiac orifice. The three incisor teeth attached to the plate was the only part visible. There was marked edema and inflammation throughout the lower third of the esophagus. An effort was made by grasping the teeth with ordinary forceps to dislodge the imbedded plate, but the instrument was found too delicate. However, we finally succeeded in delivering the plate intact with a flexible forcep which had been purchased in the pre-esophagoscope days.

Mosher has devised an instrument for cutting a tooth plate, but this would not have been practical as the plate had become so thoroughly embedded. An application of silver nitrate was made to the ulcerated surface and the patient

fed hot milk until all inflammation had subsided. The last time the patient was seen he was in good condition.

NON-OPAQUE FOREIGN BODIES:

In children the most frequent and fatal forms of foreign bodies which find lodgement in the food and air passages are the various kinds of grains and nuts, such as corn, beans, peanuts, etc. Such substances are more likely to be followed by immediate death, or later develop violent inflammatory reaction than the inorganic substances. The roasted peanut is peculiarly irritating and usually produces a train of symptoms of its own known as "peanut bronchitis". The x-ray and fluroscope do not give us aid in locating this class of foreign bodies which they afford in the opaque form, yet they are often invaluable in determining the pathology resulting and should always be used if the time can be taken. The history we get in these cases is often vague, but physical examination by a physician of experience will often determine the presence of the foreign body. By careful study of the physical signs it can be determined what portions of the lung are being deprived of air and drainage and from this the almost exact location of the foreign body can be deduced. The bronchoscopist should always study these cases with the man in general medicine and the roentgenologist if he hopes to serve his patient best, at the same time gaining some knowledge of these cases.

Case IX. Referred by Doctor Harris of Bloomington, Indiana. A boy five years of age while feeding chickens aspirated a grain of corn into the trachea. Doctor Harris was called at once and finding the child in spasms, with coughing and dyspnea, he immediately brought the child to the Methodist Hospital. Everything was ready when the patient arrived. Careful ether anesthesia was given, a bronchoscope introduced per oral and a large grain of corn found lodged in the right lower lobe bronchus. It was grasped with forceps and brought up to the glottis with the 'scope. In an effort to bring it through the glottis a spasm was caused which seemed to be fatal. A quick tracheotomy was done and the grain of corn removed. Artificial respiration restored normal breathing after considerable effort and the patient recovered after a few days in the hospital.

Case X. Is almost exactly similar to the last. A grain of corn aspirated by a child five years of age while playing with corn. Doctor Tyn-dall of Shelbyville was called at once and finding the patient with frequent spasms of coughing and cyanotic, took him in his car and made a hurried trip to the Long Hospital in this city, after notifying my office by long distance. When the patient arrived he was so cyanotic that

anesthesia was unnecessary. With the bronchoscope the grain of corn was found in the right middle lobe bronchus. Just as we were about to deliver it one of the physicians present, in his desire to see it brought out, kicked over the battery, breaking the electric connections and leaving us in the dark. When the lights were turned on in the operating room our patient was apparently dead. A stab tracheotomy was done and with artificial respiration the patient was restored. It is unnecessary to state that this case caused us a few anxious and dramatic moments.

Case XI. A boy four years old, referred by Doctor Little, was seized with spasms of coughing and choking while at play. The symptoms became so alarming that Doctor Little was called. He suspected a foreign body and possibly a grain of corn, as the child had been playing in a corn field. The patient was brought to the Methodist Hospital. Physical examination of the chest clearly indicated a foreign body, probably on the left side. Characteristic symptoms of wheezing respiration, dyspnea and coughing were present in a marked degree, with a temperature of 101 degrees. A bronchoscope examination was made per oral lasting twenty minutes without being able to locate the foreign body. After a few days' quiet in bed an x-ray examination was made by Doctor Beeler and the report said, "There is a shadow on the left side which is rather suspicious, but not positive." On the second bronchoscopic examination we found the left lower lobe bronchus swollen and partially filled with exudate. After clearing the tube, a flat white grain of corn was found adhering close to the mucosa. It was removed through the 'scope, the operation requiring ten minutes. The lung cleared up in a few days.

Case XII. A boy fourteen years of age, the patient of Doctors Stayton and MacDonald. Doctor MacDonald had obtained a vague history of the aspiration of a peanut. This child was so ill that we had some hesitancy in making a bronchoscopic examination at the time—temperature 104½ degrees and pulse 140. The pleural cavity had been aspirated for pus. A bronchoscopic examination was made, however, as the discovery of a foreign body seemed the only hope. The right lower lobe bronchus was found inflamed and full of exudate. After clearing the tube by suction and sponging, one of the smaller bronchi was found to be filled with what seemed to be a portion of a peanut kernel. On removing it with forceps the abscess broke, filling the bronchoscope with pus. After a quantity of pus was coughed out the patient's breathing became better. This was followed by a rapid fall of temperature and pulse and gradual recovery took place.

Case XIII. A child aged eleven months was referred from near Frankfort, Indiana, with the statement that a bean had been aspirated the day before. The child's breathing was labored and its appearance cyanotic. An x-ray was made by Doctor Beeler at once. The body being non-opaque, the x-ray did not show its location. Bronchoscopic examination under light ether anesthesia revealed the bean in the right middle lobe bronchus. It was embedded so tightly in the irritated tube that we could not dislodge it with any forceps at our command at that time. A tracheotomy was done and a tube put in, hoping we might have another chance, but the child died that night from dyspnea.

Case XIV. A penny removed from the esophagus of a child three years old. Nothing unusual in the case.

Case XV. A child six months of age swallowed a twig of a Christmas tree. This was removed from the middle third of the esophagus through the esophagoscope.

THE PHYSICIAN

"THOU SHALT NOT KILL"*

BY FRANK B. WYNN

INDIANAPOLIS, INDIANA

At first thought the commandment which is the title of this essay would seem to be wholly inapplicable to practitioners of medicine. Yet even the most cursory study of their professional conduct will reveal many who are innocently, ignorantly or even criminally responsible for the loss of life. These sins are more often negative than positive. Professional ignorance, carelessness or selfishness does not absolve one from responsibility in the performance of duty. Since the care of life is placed upon our shoulders, this imposes the most serious obligation to bring to bear all the agencies within our power for the relief or cure of the patient. Critical observation impresses one that even good men, measured by the ordinary standards of conduct, fail to comprehend the gravity of this responsibility.

First, how often are we guilty of negative sin in public health matters—carelessness or oversight in reporting contagious and infectious diseases. The management of almost every case of infection, acute or chronic, carries with it the personal obligation of the physician to put out the warning signal—to give always without money and without price the instructive knowledge which will prevent further extension of the disorder. What fearful responsibility rests upon us too, as possible carriers of infection. In this vast altruistic program let us not be discouraged by the indifferent attitude of the public so quick to question the wisdom or sincerity of

our action. We should rather with unabated fervor continue our support of all public health movements. To do less would constitute contributory negligence in the taking of life.

Vaccine treatment (and its kind) constitutes the dominant therapeutic fashion of the day. The innumerable biologic products of the great pharmaceutical houses, with their enticing and suggestive literature, often lead the unwary astray. Novices who do not fully understand the conditions warranting such treatment rush to its use with innocent enthusiasm but in ignorance of its dangers. One should remember that the injection of a foreign protein into the body is always a serious matter. Future medical history will undoubtedly record that through the cupidity of commercial houses, members of the medical profession have often been led astray in this matter of vaccine administration. Aside from the serious harm and danger to life arising from their improper use, it is humiliating to the good name of medicine to have been duped by a grasping commercialism.

In no phase of medical practice are the sins of omission so common as in the realm of diagnosis. It is a natural error and there are mitigating circumstances oftentimes. The busy practitioner especially is likely to fall into the habit of drawing hasty conclusions from subjective phenomena. A patient comes with a ready-made diagnosis, only asking for a prescription. It is polite and so easy to follow his lead and prescribe a symptomatic remedy. For headache bromides may be given only to find a few hours later uremic convulsions, which might have been ward off by proper measures at the right time. Or pain in the epigastric area or right lower quadrant is permitted to go with a prescription for "biliousness" or "intestinal indigestion". Golden hours are frittered away when prompt surgery might relieve with success a condition which later becomes hopeless. Not less culpable is the case diagnosed as appendicitis and operated immediately, when the day following reveals the essential condition to be right sided pneumonia with reflex abdominal pain. Or what sin of omission is more common than prescribing a cough sedative to a person with an acute "cold" giving assurance that prompt recovery will take place. A month later the patient returns running temperature elevation and having well marked signs of acute pulmonary tuberculosis. Again, surgical experience and pathology have long since proved incipient cancer curable by radical measures. Yet how common is procrastination until metastases proclaim the doom of the patient. The disposition we all acquire with maturing experience and years to place greater faith in nature's capacity to combat disease should never find justification in the treatment of cancer.

*Fifteenth of the series of articles by Dr. Wynn appearing regularly in THE JOURNAL.

When and when not to operate are questions which perplex both special and general men. Honest differences of opinion prevail. Inexcusable procrastination on the one hand and presumptuous radicalism on the other are unseemly and often disastrous to the interests of the patient. A few well established standards have been worked out, disregard of which is apt to be followed by serious or fatal results. In some surgical conditions temporizing is a sin just as in others delay is a virtue. In fulminant appendicitis immediate surgical attack is the proper procedure; but in acute gall-bladder disease cautious delay and later operation will generally enhance the patient's prospects of life. Procrastinating in cases of chronically infected tonsils giving a history of rheumatic and neuritic attacks, is just as inexcusable as to radically invade tonsillar tissue when there is constitutional and local evidence of acute infection. Operation in the latter case is very apt to pour virulent septic and toxic material into the blood and lymph streams, often followed by acute pulmonary, renal or cardiac involvement of grave significance. Even a minor operation like the wholesale extraction of teeth which are pyorrhoeal is sometimes followed by local organic implantation. Hence in these cases it is rarely advisable to extend the extraction over two or three sittings.

In other cases where multiple foci of infection exist it often requires large self-control and moral force on the part of the surgeon to abstain from wholesale ablation of pathologic lesions, remote from each other. Patients themselves insist upon having the whole field cleared at a single operative attack. Under such circumstances the operator should always lay close to his conscience the fact that every additional focus of infection attacked surgically adds greater shock and larger possibilities of spreading infection. In practice one often observes in one surgical procedure, operation upon the appendix and the female adenexia. The propinquity of parts makes this feasible. On the other hand the simultaneous attack upon septic foci remote from each other—say the gall-bladder and tonsils—subjects the patient to infinitely greater risks. It is a species of gambling with the protective forces of the body which good surgical judgment will seldom tolerate. Instead of such surgical adventure it were wiser to be less brilliant and exhibit keener conscience for the saving of life.

The chief topic of discussion in this essay is that of criminal abortion. This crime has existed in all ages. It has been more prevalent in civilized countries than among primitive races. Even in our own land it has been a matter of frequent observation that the families of our grand parents were larger than in our own day—partly due to their physical sturdiness, partly because

less given to the modern sin of preventing conception, and most of all from the fact that the public conscience was keenly opposed to the interruption of the course of gestation. What are the underlying factors which have brought about this change of attitude toward begetting and bearing children and home-building?

The rapidly increasing urban population constitutes the chief foundation stone of this crime. The artificial life which it begets makes children inconvenient. Among the leisure class where childbearing should be prolific, the feminine patrons of luxury and comfort give way to the spell of indolence and selfishness. The consuming thought is not how they may become the matrons of large and healthy families but how they may avoid these physiologic triumphs and substitute the enervating social life with its irregularities and excesses.

And since this is the goal toward which the extravagances and fashions of the age point, the young man of moderate means hesitates to face the responsibilities of marriage. Or should he do so he is driven by the fear of large social demands and the financial burden of maintaining a large family, into accepting and practicing the common sex sins of preventing conception or resorting to abortion.

Near akin to the social errors of the day in feeding these vicious practices is the restless spirit of the age—the morbid craving for sensational excitement, quite inconsistent with the practice of domestic virtues. To be reckoned with also is the habitation question. Modern apartments have rapidly usurped the place of the cottage and home. Apartments are not suited for the rearing of children; and furthermore the little ones are not wanted. So does commercialism join hands with vicious social and sex-life in the promotion of abortion.

That public sentiment has become tolerant of the practice of abortion is borne out in the experience of every general practitioner. As the newly married couple enters the private consultation room, one hopes that they have come to express joy over conception and the prospect of parenthood. But not so. Their whole demeanor is apologetic. A flimsy array of excuses is offered why she should be "brought around"—her friends will make sport of her for having a baby so soon; it will interfere with numerous social engagements; she is not strong, etc., etc.

In listening to such narratives it was always difficult for me to repress indignation. What is particularly irritating is that they so often assume an air of confidence that the doctor will yield to their importunities. Curiously it does not seem to occur to them that they are asking the physician to engage in a criminal act; and that on their own part they are guilty of murderous intent based upon the most sordid selfishness.

Here is one of the most difficult and delicate questions which the general practitioner must face. It is not merely a question of ethics to the physician—it is a problem of vital concern to the morals of the community, the health and happiness of the citizenship and the growth and stability of the State. The practice is undermining the very foundation of our national life—the home. Legislation will not correct the immoral tendency. The law never has been able to make substantial progress in bringing professional abortionists to a reckoning. Larger reform will result from the profession seeking to purify the fountainhead of this vile stream. It is for us in public and in private to show on the one hand the physiological wrong and the grave dangers of such practices; and on the other to hold up the ideals and rewards of the home with children to make secure the marital union—bringing new burdens it is true, but greater rewards in the end. It is for us to make plain that the violation of the physiologic law is not merely a crime. It brings upon its perpetrators a restless and unsatisfied life. It is the opening of a Pandora box of evil spirits, spreading disaster in the household—selfishness, cynicism, sex-suspicion. As the sexual fires burn low, marital infelicity flames high. The victims pass down life's journey without children or grand-children to lighten their burdens or brighten the pathway. Some have the wisdom to try to retrieve their moral losses by adopting children—an experiment which generally yields splendid results.

Here then is laid upon the profession a tremendous responsibility. Who is in a position to render such valuable service for the physiological and social good of the race? Is there not deep need of a quickening of the medical conscience upon this question?

I cannot better close this appeal than by quoting as best I can from memory an experience of early student days. It was in the office of a "Practitioner of the Old School" where I did a little study and learned more in practical wisdom. One day we noticed approaching a young man and his wife—only recently married. They belonged to the so-called aristocratic society of the little city. The doctor (blessed be his memory!) divined the mission of the young couple. Turning to me he said: "You take a seat in the apothecary shop, leaving the door ajar into my consultation room. Then listen with both ears how I handle this situation."

After ushering them into his private office the young bride opened the conversation. "Doctor, it is two months since we were married. I have not menstruated and have the most intense aversion for food. Here I am with any number of social obligations, an elaborate trousseau, and should be having the time of my life,

but I get no pleasure out of these things. We were planning a trip west next month but I do not feel like going. You know I have not been well for a year or two. Mother is terribly worried and says if I should be in a family way it would wreck my health."

She paused a moment which gave the doctor a chance to shift the current of thought which he did in this deft manner: "As I recall it, Catherine, you are now past twenty. You know I was present at your first birthday celebration and gave you your first spanking. It was a great occasion. You stirred up a terrible commotion. One time I thought you done for—blue around the 'gills' and no sign of breath! I poured cold water down your spine. You thought that an outrage and yelled like an Indian. It was a close call. You've been a lot of trouble to your folks all these years but I guess they think you worth it. Aren't you glad your mother didn't do anything to interfere with Nature's course seven months before you were born? If she had, it would have been wrong and you would not be here this minute.

"By the way, had you noticed in the morning paper that the Lambreths have separated and she is suing for divorce? What a pathetic situation! They have proud family names, wealth and social position but their union has proved a failure. Why? They started wrong. They bowed before the shrine of 'high life', worshipping the idols of selfishness, luxury and ease. They did not want children who would interfere with their indulgences. After a few years' pursuit of these things she yielded to maternal yearning for parenthood, but Nature so often balked, refused to bear fruit. Note now, the melancholy train of her physical misfortunes: Measures to prevent conception; criminal interruption of the course of pregnancy; diseases of the female organs secondary to these practices; repeated surgical operations without relief; chronic invalidism; peevishness, melancholia and sex-suspicion. There has been the development on his part of cantankerousness, cynicism, and sex-wandering. And now the climax has been reached in this divorce proceeding. My young friends, what is the thing which would have spared these unhappy people this sad fate? Children would have welded their lives into a holy union, with exalted purposes and aims. I have not the wealth of the Lambreths but I am the proud possessor of three precious gems: Ruby with her pink skin, puckering dimples and roguish chatter; Opal with her iridescent temperament as changeable as sunshine and showers in April; and Pearl, the gem of quiet steadfastness and purity! Ah, what a joy to our lives are these three children. From sleepless nights, uncollected accounts and harrassing cases I come home grouchy.

Things are not helped by my wife being irritable over domestic routine and telephone annoyances. And so we cross swords in a little family spat, but how quickly it is all forgotten and forgiven in the joy we find in our children. They make life as it runs on worth living. And so I look forward to you young people getting the same happiness out of the bearing and rearing of children that we have done." Rising to depart Catherine said: "Doctor, we will follow happily what you have advised."

The interesting sequel to this interview came three years later. They were again in the physician's private office, leading a beautiful, little boy. With heart palpitating and tears streaming down her face the young mother pointed to the lad saying: "Oh, doctor! Suppose we had carried out our selfish, carnal impulses!"

NEEDLE IN ABDOMEN SIMULATING TUBERCULOSIS OF THE HIP

ARTHUR A. RANG, M.D.

WASHINGTON, INDIANA

There are a great number of cases reported where pins, needles or fragments of needles have been found in various parts of the body, or have made their appearance under or through the skin in many different localities. Many of these reports are offered by the laity, the foreign body having been removed without surgical assistance, and often the mode of entrance is undetermined.

The following case is presented because of the peculiar history, the gravity of the situation developed, in contrast to that usually resulting from a needle being present in the tissues, and the very interesting diagnostic features developed.

M. G., age 12 years, was presented for treatment of a fistula opening over Poupart's ligament, midway between the anterior superior spine of the ileum and the pubis, with the following history:

Family record negative, except her paternal grandfather, who had tuberculosis. In August, 1913, she complained of a sudden pain in the lower right quadrant of the abdomen, which seemed deep and in the region of the appendix. The pain increased in severity and she walked with a limp, on the toes of her right foot. The family physician was called and made a diagnosis of appendicitis, which was concurred in by a consultant, and an operation was advised. This was refused by the parents and the girl was removed to a sanitarium in another city, where the case was treated expectantly. During her stay in the sanitarium she ran a continuous temperature and had night sweats. Her right leg was drawn up on her abdomen and remained so for two weeks, after which it gradually straightened out, but she was unable to walk on it without a limp for several months.

She suffered considerable pain in her right hip, became emaciated and showed very little improvement until February, 1914, when an abscess pointed and evacuated itself over the crest of the right ileum, and immediately the pain and soreness in the hip began to subside. This drainage persisted for several weeks and then closed, opening a short time later with the sinus over Poupart's ligament, which has continuously drained since then. Her weight increased and her general health greatly improved.

In the last six years she has been treated by different doctors with different diagnoses, mostly built up on a tubercular hypothesis. Among these were tuberculosis of the hip, and tuberculosis of the spine with a psoas abscess, both of which were possible with the symptoms complained of by the patient and objective symptoms presented. Without a radiogram neither diagnosis could be disproved.

In my first consideration of the case, I was impressed with the idea that the original condition must have been appendicitis, or an abscess in the territory closely associated with the appendix, and this idea was strengthened by my respect for the judgment of the physician who first saw her and made the diagnosis of appendicitis. To determine the extent, size and origin of the fistula, and the condition of the bony structures under suspicion, the fistula was injected with bismuth paste and the patient radiographed. The result was a distinct surprise, as the radiogram showed what was apparently a pin with a large head, located within the abdominal cavity near the normal location of the appendix. Two weeks later this foreign body was removed at operation and proved to be a needle, minus the eye, heavily coated on one end with concretions, which gave it the appearance in the picture of having a head. It was thoroughly embedded in a mass of scar tissue within the abdominal cavity. Following the operation a slight fecal fistula developed and continued intermittently for three months and then closed permanently.

With the history of her initial attack, with the fact that all of her bony structures appear normal in the radiograms, and with the advent of the fecal fistula on opening the external aspect of the scar mass, it seems safe to presume that this needle gained entrance through the gastrointestinal tract, to have perforated the intestine in the region of the appendix, and to have formed an abscess simulating a true attack of appendicitis, afterwards becoming enclosed in the scar mass resulting from the abscess and becoming heavily coated with concretions.

In this case, again, the importance of a radiogram in obscure conditions, and the very helpful information to be derived therefrom, is emphasized, and in this particular instance was absolutely essential for a diagnosis.

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EDITORIALS

THE SCHICK TEST AND THE ADMINISTRATION OF TOXIN-ANTITOXIN FOR THE PREVENTION OF DIPHTHERIA

While the last twenty-five years have witnessed a reduction in the mortality from diphtheria, largely as a result of the prompt and sufficient administration of antitoxin, a reduction of from 150 per 100,000 of the population to 21 per 100,000 of the population, it is apparent, as stated by the Bulletin of the Department of Health of New York City, from which we quote, that we have almost approached the control of the cases of this disease by the old method of disinfection and antitoxin administration. As the statistics of the last decade show, there has been practically no reduction in the morbidity of diphtheria. The limitation of control is due to the fact that many susceptible individuals contract diphtheria not by exposure to cases ill with or convalescent from the disease, but from carriers or persons in apparent health who harbor diphtheria bacilli in their throats or noses. It is well known that a large percentage of diphtheria cases have not been in contact with known cases of the disease. Furthermore, many mild cases of diphtheria, presenting evidence of only reddened throat or tonsillar exudate, as well as many cases of well marked diphtheria, are unrecognized and untreated. These cases contribute in no small way to the infection of susceptibles. Therefore, a still further control of diphtheria depends upon the determination of which individuals are susceptible and then to render them immune, for in spite of all rules and regulations of reported quarantine, educational propaganda, administration of antitoxin, school medical inspection, improved hygiene and sanitation, there still remains the inability to isolate and control carriers in these cases. As a result of numerous laboratory experiments and clinical observations it has been established that the Schick test provides a simple, convenient and reliable means for determining the susceptibility or immunity of individuals to diphtheria, and that the administration of three doses of toxin-antitoxin, given one week apart to susceptibles, will protect the vast majority of them—90 percent or more—against diphtheria, perhaps even during their

lifetime. The Schick test and the administration of toxin-antitoxin offers such great possibilities, that the Indiana State Board of Health proposes that all children entering school for the first time be immunized at once. Children entering boarding schools or homes for children also should have the Schick test made, and be immunized if susceptible. The material for the Schick test may be obtained from the large biological supply houses, the technique is simple, and the reactions are dependable if carefully controlled. The toxin-antitoxin preparation for immunization purposes also is sold in packages for use and is inexpensive. Comprehensive information concerning the subject will be furnished on request by the Indiana State Board of Health.

DR. HUGH CABOT'S MEDICAL SOCIALISTIC SCHEMES FOR MICHIGAN

If anyone thinks that we are borrowing trouble when we talk about the possibilities of State Medicine and the evils resulting therefrom, let him digest the statement made by Dr. Hugh Cabot, the new dean of the Medical Department of the University of Michigan, who is quoted in the daily papers as having said, "The limitations of the services of the University Hospital to the indigent people of the state to my mind is undemocratic. The hospital should be open to rich and poor alike."

We all know that the hospitals of the University of Michigan have been pauperizing the community, not only in Michigan but in sections of Indiana and Ohio, by furnishing gratuitous medical and surgical treatment to any who applied, whether able to pay for such services or not. Even if the authorities of the University of Michigan considered that the taxpayers of Michigan were entitled to gratuitous medical and surgical services because of the taxes paid to support the institution, it is inconsistent to consider that people residing outside of Michigan, who pay no taxes to the support of the institution, should be accorded like privileges. However, the system is wholly wrong and in the end is bound to end disastrously. There is no reason why the rich or well-to-do people of Michigan should not pay for their medical and surgical services just as well as to pay for their plumbing or for any other services rendered them. If the state is going to furnish gratuitous medical and surgical services to the rich, then why not furnish them other necessities, or for that matter with automobiles or other luxuries enjoyed by the rich. We notice that most of the advocates of this pernicious form of State Medicine are safely entrenched in a soft berth for themselves, and Dr. Hugh Cabot, perhaps not being really obliged to practice medicine as a vocation, is very fortunate in being

at the head of a great University which pays him a salary that amply provides a comfortable living for him, but what about the struggling doctors, perhaps graduates of the Medical Department of the University of Michigan, who are depending upon the public for support, but who must compete with their *alma mater*, and, worst of all, an *alma mater* that donates its services to rich and poor alike? The time and money expended in securing a medical education means nothing and brings nothing unless its possessor can fall into a soft berth provided by federal, state or municipal support.

However, aside from all this discussion of the economic phase of the situation as it affects doctors, there is a far more important matter for consideration and that is the one of the limitations of the individual effort. It is quite possible that a few men occupying soft berths may continue to progress, but for the vast majority there is little initiative and in the main patients are going to fall into the hoppers of institutions that treat them in a rather impersonal and machine-like way, often-times with mediocre services. Aside from this there will be the ever present political phase of the scheme to be dealt with, and experience shows that those selected for federal, state and municipal positions are not always those who are best qualified, but those who, for one reason or another, are able to control the most influence. We have no quarrel with those who see fit to furnish free medical and surgical attention to the worthy poor, for that practice is upheld and followed by every member of the medical profession, but the scheme proposed by Dr. Hugh Cabot is unworthy of acceptance as being the best for the institution of which he is dean nor is it the best for the people of the state. For the medical profession it eventually will prove annihilation, as private practice, except in a few isolated instances, cannot exist in the face of that sort of competition.

It strikes us that Michigan has been flirting with several socialistic features, and the Medical Department of the University of Michigan long has been a thorn in the flesh of the medical profession of the state through its tendency to socialize the practice of medicine. Now comes Dr. Hugh Cabot, resplendent with the glamour of a reputation secured in the literary, aristocratic and esthetic atmosphere of Harvard University, with revolutionary and bolshevik notions which, as dean of the Medical Department of the University of Michigan, he expects to thrust upon the people of Michigan, whether they want them or not. Perhaps a certain element among the people in Michigan will shout their approval, but what about the members of the medical profession whose throats are being cut in order to furnish greater reputation and

power for men like Dr. Cabot? And what about the people who in the end will be the greatest sufferers from such an impracticable scheme? As we have said before, if we are going into this socialistic business, why not socialize everything, like they do in Russia, and get the agony of the experience over at once in order to get back to the sane conduct of affairs at an earlier date? It is as fair to put all vocations under state control as it is to put the medical profession there.

This whole question of state medicine reminds us of what we have said before, and that is that the medical profession has more to fear from members in its own ranks, men who have been placed in high positions very largely through the efforts of their fellow professional men, who are really the worst offenders in advocating and supporting some of the wild, impractical and socialistic schemes which have as their ultimate end the annihilation of private medical practice. It is time to have an accounting and separate the sheep from the goats. We may have a very high regard for Dr. Hugh Cabot's ability, but we have only condemnation and censure for him in advocating such schemes as he proposes in Michigan, and the quicker the medical profession places its stamp of disapproval upon him when he continues to advocate such socialistic schemes as the one which forms the basis of this discussion, the better it will be for the medical profession in Michigan.

CANCER CONTROL

Ninety thousand people in the United States die of cancer every year. With the present state of medical knowledge it is considered possible, by those in a position to know, to cut this death rate in half. This would mean the saving of forty-five thousand lives annually. A large proportion of these deaths are due to the fact that cancer is not recognized early. The chief reason why cancer is not usually recognized early is because the people generally are ignorant of the way cancer begins, and therefore do not consult a physician as a rule until the cancer is well advanced. Another reason why so many cancers fail of recognition early is, we regret to say, due to a lack of knowledge or appreciation on the part of some doctors of the early signs of cancer and precancerous conditions. All too often the surgeon has patients referred to him only after weeks or months of "observation", and sometimes "treatment".

The early diagnosis of cancer is not easy, but is possible in a large proportion of all cases, and in all cases save those involving internal organs. All cases of suspected cancer should be promptly subjected to a thorough examination. However, as previously indicated, the

chief reason for the high death rate from cancer lies in the ignorance of the people, and it was largely for the purpose of overcoming or reducing this ignorance that the American Society for the Control of Cancer was organized. In the dissemination of necessary knowledge to the public, this organization is using all available channels, including the lay press, clubs, moving pictures, etc., and medical societies are urged to hold meetings from time to time to which the public is invited, at which the subject of cancer is presented in a proper popular way. The society will also furnish speakers for professional meetings for the purpose of assisting in bringing the latest knowledge of malignant disease to the attention of the general practitioner. Mrs. A. J. Detzer, 910 West Wayne Street, Fort Wayne, Indiana, is the secretary of this society for Indiana. Mrs. Detzer will, upon request, supply speakers and literature for clubs and medical societies throughout the state. Women's clubs should be especially interested in this matter, for cancer is much more (about 2 to 1) frequent in women than in men. It is not perhaps generally known that among people over 40 years of age cancer causes more deaths than tuberculosis or pneumonia.

The American Society for the Control of Cancer will conduct a cancer campaign throughout the United States from October 30th to Nov. 5th. We urge every doctor and every medical organization in this state to actively support this movement. The good resulting from the campaign will depend largely upon the degree of public interest aroused, and this will depend upon the activity and interest displayed by the profession. The aim is to reach every community with the cancer message during "Cancer Week", and we urge doctors throughout the state to see to it that their particular community gets this message. A letter addressed to Mrs. A. J. Detzer, Fort Wayne, Indiana, will bring any information desired.

One death in every ten after the age of 40 in this country is due to cancer. If every doctor does his duty this death rate can be reduced one-half.

STATE MEDICINE

Henry Ford of "flivver" fame may be visionary in some things, the reputation having been gained largely through his spectacular efforts to secure peace during a dark period of the world war, but in many ways he has shown himself to be the possessor of ideas that are fundamentally sound and worthy of thoughtful consideration by the public at large. This is evidenced by his opposition to public ownership of utilities, his expression of opinion concerning the management of large commercial interests, and

quite recently his opinion concerning the subject of State Medicine, which has appeared as an editorial in his international weekly, *The Dear-born Independent*. While Mr. Ford may not have been the writer of the editorial, he certainly sanctioned its appearance in his weekly, and it is so pertinent to the subject that we herewith reproduce it:

State ownership and control is perfectly sound in theory, but has proved itself wholly unsound in practice. There may be countries in the world where it is safe to trust the control of vital interests to the group of men who comprise the government; it has not always been safe in this country, as years of experience prove. The revelations of official incompetency, and not so much incompetency as dishonesty, during the recent war period, will effectually modify any theoretical appeal which the idea of state control may have.

But that there are influences in this country which are bent on bringing all the people's affairs under official scrutiny, is most apparent from the efforts now being made to create a sentiment in favor of "state medicine". This means simply: more jobs, no privacy, curtailment of freedom, the destruction of the medical profession by the discouragement of research work, and the coarsening of delicate intimacies. It means practically that what the United States Shipping Board did to the shipping situation of the country, "state medicine" would be permitted to do to the people's health.

The most astonishing feature of this propaganda is the assumption that the proposal *could* be made attractive to the American people. Most cities have city physicians now, and most counties have county physicians, and no one rests under any doubt of the quality of the services rendered. The public has had a wide experience in going to its officials for sufficient water, heat, light, school facilities and transportation service, and sufficient difficulty in getting any kind of service at all at any reasonable tax rate, to prevent its falling in love with the idea of going to its officials for a medicine when it is sick. Practically, it will not work; the genius of the American people is against it.

Between family physicians and families there is a confidential relation which rests on choice and experience. It is not official. It is not altogether professional. It partakes of the confessional in large degree, and constitutes a friendly pact based on the experience of many fights with disease and death. So well recognized is this that the family physician has become a fixed figure in our lives, and with results of undoubted good, as the records generally show.

To change all this and establish a police health station, as it were, at which citizens must apply for medical aid and await the pleasure of an official doctor who is paid anyway, and whose professional career does not depend on the confidence he is able to evoke by skilled and loyal service, is to suggest something which is so alien to our Americanism as almost to prove an alien course and an alien purpose.

With the growing predilection of a certain group for medicine and surgery, and with that group's constant predilection for securing control of the intimate sources of the people's confidence and strength, there is no doubt whatever as to what complexion "state medicine" would take if it were adopted.

These are times when more than at any previous period the American people must be on guard against *ideas* that are not American. The time has come

for the exercise of a wholesome defensive suspicion about many things that outwardly are made to appear desirable, but inwardly conceal dangers to our fundamental traditions and liberty. And we are never more justified in our suspicions of alien influences for an alien purpose than when we see attempts made to "regiment" the American people or their private affairs.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

DON'T gamble too much on the firm that is forever prating about its "quality of service". It is a good deal like tying up to a man who tells everybody how honest he is when, as a matter of fact, it is a good plan to hold on to your pocketbook when you are around him.

DR. WILLIAM R. DAVIDSON, of Evansville, the incoming president of the Indiana State Medical Association, has long been identified with the activities of the Association, and well deserves the honor that has been conferred upon him. The Association has honored itself in honoring him.

THE Christian Scientists claim that Christian Science healing is not medical practice. We admit it. In most instances it approaches fraud, and in a few instances it is criminal if used to supplant rational and tested procedures for saving life when threatened by serious diseased conditions.

ON the first of September, according to the government report, diphtheria was unusually prevalent in Indiana, the number of cases being more than twice as many as those of scarlet fever or typhoid fever. This leads us to inquire as to why the Schick test and preventive doses of toxin-antitoxin are not more generally employed.

WITH the beginning of the public schools the time has arrived for determining the susceptibility to diphtheria by employing the Schick test and immunizing children by the administration

of toxin-antitoxin mixture. It would be well for physicians and public health officials to take the trouble to acquaint parents with the value of this procedure.

THE attention of readers of THE JOURNAL is called to an open location for the practice of medicine at Hemlock, Howard County, Indiana, which is left vacant by the death of Dr. L. DeWees. The town is located in a good farming community and there is no competition nearer than five miles. The office, drugs, instruments, etc., of the late Dr. DeWees are all in good condition, and definite information concerning the practice may be secured by addressing Mrs. L. DeWees, Hemlock, Indiana.

THE Indianapolis Session of the Indiana State Medical Association may be counted as one of the best ever held. There was an attendance of between five and six hundred. The papers and discussions were better than last year, and the social features were all that could be desired. The occasion was more interesting as a result of the visit of Surgeon General Ireland, a native of Indiana, who delivered the principal address at the banquet. Dr. William R. Davidson, of Evansville, was the unanimously chosen president for the ensuing year, and Muncie will be the place for the 1922 session.

MEMBERS of the medical profession can show in no better way their appreciation of any efforts on the part of the lay publications to uphold and advance scientific medicine than by subscribing to the *Woman's Home Companion* which recently has been boycotted by the antivivisectionists because of its stand in favor of animal experimentation when properly regulated. It may be possible that the *Woman's Home Companion* offers little of interest to the average doctor, yet he can place it upon his reception room table where it probably will prove interesting reading to the feminine members of his clientele.

THE osteopaths are doing a lot of newspaper advertising in an endeavor to show the public what they can accomplish by practicing their peculiar ideas. The latest thing is a brochure on the osteopathic treatment of eye, ear, nose and throat diseases. Among interesting claims put forth are those relative to the osteopathic cure of enlarged tonsils, adenoid tissue in the nasopharynx, hay fever, deafness, cross eyes, running ears, and some other affections that we know to be successfully relieved only by the application of surgery or some treatment aside from mechanical manipulations. However, it is a safe bet that the newspaper advertising will bring a lot of suckers to the net.

THE Riley Memorial Children's Hospital, to be erected in Indianapolis, is a most worthy enterprise and should have the support of the medical profession. At the Indianapolis session the Indiana State Medical Association offered its encouragement and support to the enterprise with the distinct understanding that the hospital is for the *indigent* children of the State of Indiana. We are under the impression that the addition of the word *indigent* to the endorsement of the project is thoroughly justified in this age when uplifters are offering all kinds of schemes for pauperizing the community by furnishing gratuitous medical and surgical attention to many who are not only able to pay for it but should do so.

STUDIES made by various observers definitely show that from one to three percent of all persons affected with typhoid fever become chronic typhoid carriers. These constitute a serious menace to public health and constantly threaten epidemics. To obviate the overlooking of carriers, the New York City Board of Health requires that, in addition to the two negative stools which are necessary before a case is discharged, every terminated case of typhoid fever shall be required to submit two additional stool specimens two months after termination of the case. It is thought that this additional safeguard eventually will bring to the notice of the Board of Health cases in which the discharge of typhoid bacilli from the intestines is intermittent. The plan adopted in New York City may with profit be adopted in other cities and towns throughout the country.

IT is no idle dream to look forward a few years when the medical profession will be socialized, unless something is done to stem the tide that insidiously is working in that direction. Already various socialistic and paternalistic schemes for control and supervision of the activities of the medical profession have been proposed, and in some states scarcely missed being put into operation, but the rank and file of the medical profession slumbers on content to say "why make a mountain out of a mole hill?" or "why cry 'wolf' when there is no animal in sight?" Our own idea is that it will take more than a charge of dynamite to awaken the medical profession from the lethargy it now seemingly enjoys, but the trouble of the awakening will be that it will put the profession into another sleep that will be deeper but far more troubled than the one that is being enjoyed at the present time.

OUR medical and surgical books with their illogical and ignorant teachings are now obsolete, for lo and behold, the chiropractors have

discovered new theories as to the cause of disease. A leading chiropractor emits the following: "Goitre is caused by subluxations of the vertebrae, which produce pressure upon the nerves emitting from the adjacent foramina and brings about a pathological condition in which the function of expansion (cell growth, or cell multiplication) is affected; there being an excess of development of the cells to what is needed for the normal secretion of the thyroid fluid. That is, the new cells which are brought forward to replace the old, worn out or exhausted cells are being brought forth too rapidly, or before they are really needed."

"Just as clear as mud," and just as effective as antiphistine on the broken leg of a wooden Indian!

THE members of the medical profession, for the first time in their lives, are beginning to realize the necessity of being on guard to prevent the acceptance of various schemes proposed ostensibly for the benefit of the public good but in reality offering a means of socializing the practice of medicine. We have been lending our support to public health work of every description, and very justly so as long as the public health work has been conducted along the lines followed in years past. However, at the present moment there is a tendency on the part of many of the public health officials to so broaden the field of public health work as to make serious inroads into private medical practices and trample upon the toes of the doctors who depend upon their professional work for a living. In fact it was demonstrated at the Boston session of the A. M. A. that what we had most to fear in much of the so-called uplift work that is detrimental to the medical profession at large is the attitude of public health officials. They stood shoulder to shoulder for some actions on the part of the A. M. A. that would be not only economically detrimental to the medical profession at large, but in many instances would prove positively vicious. By all means let us be on our guard as to whom shall represent us in the House of Delegates at the A. M. A. sessions and who are to serve as officers of the parent organization. We have had quite enough of the Lambert stripe and satellites.

DR. GEORGE F. EDENHARTER, superintendent of the Central Indiana Hospital for the Insane, located at Indianapolis, announces the twenty-second annual course of clinical lectures in psycho-pathology and psychiatry, neurology and neuropathology. Dr. Max Bahr has charge of the course in psycho-pathology which is to be given during the first semester, from September 17 to January 14, and represents a series of

lectures with clinical demonstrations on the psychic elements and their derangements.

The instructors in the course in psychiatry, neurology and neuropathology are Drs. Max Bahr, Charles F. Neu and Charles D. Humes. This course is to be held during the second semester, from February 7 to May 23, and consists of the presentation and demonstration of pathologic specimens which show the pathology in the type of cases which are presented in the lectures following the demonstration. There also will be clinical conferences in the presentation of cases not scheduled by the regular lecture hour.

The hospital, with an enrollment of over fifteen hundred patients, a separate hospital for "sick insane" and a large and fully equipped pathologic laboratory with amphitheater for lectures and clinics, furnishes appropriate and abundant material for research and investigation and also affords an excellent opportunity for teaching the Science of Mental and Nervous Diseases, including their diagnosis, treatment and management. The lectures are free to practitioners and students of medicine. Further particulars may be secured by writing Dr. Geo. F. Edenharter, Indiana Central Hospital for Insane, Indianapolis, Indiana.

As an evidence of how easily the clergy is duped we have before us the advertising matter of two Indianapolis "cancer specialists" containing photographs and flattering endorsements from a number of members of the clergy. Aside from the fact that ministers of the gospel in general always have helped the progress of quackery and the sale of the most notorious humbugs in the line of proprietary medicines, a reason for the endorsement of this Indianapolis Cancer Hospital is found in a certificate which distinctly states "If you personally interest yourself in sending us one patient whom we accept as a patient at our Hospital we will immediately mail you twenty-five dollars for your trouble". On the reverse side of the certificate, preceding the line for the signature of the minister, is the following statement: "My name is not to be mentioned. This is strictly confidential." As a further inducement for the referring of patients by members of the clergy another circular is included which says that "a high grade knife will be sent, absolutely free, to a selected list of ministers who will give us the names of one or more persons who, to their knowledge, are now afflicted with cancer, lupus, or tumor. This information will be regarded as confidential and your name will not be mentioned." Among the ministers who are endorsing this quackery we find one Indiana man, advertised as Reverend F. M. Huckleberry (a fruity sounding name but a "nutty" possessor),

of Franklin, Indiana. The advertising matter states that in the treatment of cancer "a liquid laboratory product has been developed which is injected directly into the cancer or tumor". In order to show that victims must go to the fountain head for their treatment, the following statement is made: "We do not sell this product to anyone. (We have no agents.) Physicians or anyone would have to learn the technique of the injection treatment before giving it to patients and rather than have it misused, we allow it to be administered only under our personal supervision." Members of the clergy who endorse this kind of quackery, and especially those who accept the commission offered for referring victims, should be driven out of the churches with which they are connected. There is room in the world for intelligent, conscientious and honest ministers of the gospel, but imposters and hypocrites should be thrown out.

DEATHS

JAMES A. STAFFORD, M.D., aged 81 years, died at his home in Newcastle, September 12, 1921, as a result of a stroke of apoplexy. Dr. Stafford graduated from the Physio Medical Institute of Cincinnati in 1867.

GEORGE W. KIRKPATRICK, M.D., of Lafayette, Indiana, died at his home September 22, at the age of eighty-six years. Dr. Kirkpatrick had retired from active practice nearly fifteen years ago and was the oldest physician in Tippecanoe County.

JOHN F. CULLY, M.D., died at his home in Bainbridge as a result of apoplexy. Dr. Cully was a graduate of the Rush Medical College, Chicago, and was a member of the Putnam County Medical Society and the Indiana State Medical Association.

S. L. ENSMINGER, M.D., aged seventy-seven years, died at his home in Crawfordsville, September 25, 1921. Dr. Ensminger graduated from the Miami Medical College, Cincinnati, in 1874 and was a member of the Montgomery County Medical Society and the Indiana State Medical Association.

A. J. KESLER, M.D., of Fort Wayne, died September 14 as the result of a hemorrhage. Dr. Kesler had been coroner of Allen County and was a member of the city board of health. Dr. Kesler graduated from the Fort Wayne College of Medicine in 1886 and was a member of the Allen County Medical Society and the Indiana State Medical Association.

HENRY H. THOMPSON, M.D., of Noblesville, died of double pneumonia at his home, September 21, 1921, at the age of forty-four years. Dr. Thompson was a graduate of the Washington University Medical School, St. Louis, and was a member of the Hamilton County Medical Society, the Indiana State Medical Association and the American Medical Association.

HARLEY H. SUTTON, M.D., of Aurora, died at his home, September 1, at the age of sixty-nine years. Dr. Sutton graduated from the Jefferson Medical College of Philadelphia in 1877. For many years he served as president of the Dearborn County Society for the Prevention of Tuberculosis. Dr. Sutton was a member of the Dearborn County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. A. M. KIRKPATRICK, of Columbus, Indiana, recently lost a tube of radium valued at \$1,200.00.

DR. A. M. SULLIVAN and family, who have been in New York since last April, returned to South Bend October 1st.

DR. S. D. BEAVERS and son, Dr. Ben Beavers, have formed a partnership for the practice of medicine at Decatur, Indiana.

DUE to the general reduction of prices on everything the physicians of Gary have reduced their call charges to two dollars.

DR. G. L. MCNEAL, of Kokomo, has returned to his office for practice after an absence of nearly three months due to illness.

THE Reid Memorial Hospital of Richmond, Indiana, has received a bequest of \$30,000.00 through the will of Mrs. Helen Dongan.

DR. and MRS. A. C. CHENOWETH have moved from Wabash to Andrews, where Dr. Chenoweth has taken up the practice of medicine.

THE Methodist Episcopal Hospital and Deaconess Home, of Indianapolis, is the recipient of \$6,000.00 for the endowment of a room, by the will of Fidelia Anderson.

DR. ROBERT L. MCCLURE, of Gosport, Indiana, and Miss Lorena J. Eaton, of Princeton, Indiana, were married at Franklin, August 22, 1921.

THE Grant County Medical Society held a meeting at Van Buren September 20, 1921. The principal paper was presented by Dr. Fair, of Muncie.

DR. NELSON H. YOUNG, of Toledo, has been appointed senior physician at the National Sanatorium for Veterans of the World War at Marion, Indiana.

DR. H. S. HATCH, superintendent of the Sunnyside Sanatorium, Indianapolis, and Miss Violet Wilmetta Brewer, of Southport, were married August 5, 1921.

DR. J. C. BAXTER, of Auburn, has been appointed county physician of DeKalb County. His duties are to treat the patients at the county infirmary and county jail.

DR. W. W. HARRIS, of Ellettsville, Indiana, who was in charge of the federal war risk board until its recent abolishment, will reopen his office on North Washington street.

DR. T. SCOTT SCHILDT, of Bremen, Indiana, will remove to Princeton, where he has purchased the property, equipment and practice of an old physician, for the practice of medicine.

DR. E. D. CLARK, of Indianapolis, who was operated for gall stones at the Lakeside Hospital, Cleveland, the latter part of September, is reported as making a very satisfactory recovery.

DR. and MRS. R. S. GALBREATH will leave Huntington the first of November to spend the winter in New York, where Dr. Galbreath will take a course in surgery. They plan to return to Huntington in the spring.

DR. L. L. BULLEIT, of Palmyra, is taking a six months' postgraduate course in Chicago after which he will locate and continue his practice. His present practice will be taken up by Dr. Robertson, of Campbellsburg.

THE Washington County Medical Society held its regular meeting at Salem, Wednesday evening, September 7. A paper on obstetrics was presented by Dr. W. L. Green and several reports on cases of typhoid fever were given.

DR. JOHN H. WILLIAMS and family, of Cowan, Indiana, have recently returned from a motor tour of the East, having covered the whole trip of 3,000 miles with a camping trailer, and sleeping in the open during the whole trip.

THE regular monthly meeting of the Anderson Academy was addressed by Dr. D. W. Crile, of the Augustine Hospital in Chicago, on the subject of "Fractures". Drs. T. E. Eckhart, of Marion, and S. A. Marshall, of Kokomo, also discussed this subject.

DR. C. W. HOWARD, of Crawfordsville, and Miss LaVerna Schultz, of Newtown, were married August 27, 1921. After a short wedding trip they will be at home in Crawfordsville where Dr. Howard specializes in the practice of the eye and ear.

THE U. S. Public Health Service has arranged to hold a series of twenty-four institutes at various population centers throughout the country. No tuition is to be charged for these institutes, one of which will be held at Indianapolis from February 13 to 18.

ANNOUNCEMENT has been made of the establishment of a new firm in Franklin, Indiana, by the name of Records & Records, the members of which are Drs. John N. Records and A. W. Records. They will occupy the offices left vacant by the late Dr. L. L. Whitesides.

DRS. C. R. BIRD, D. E. DOUGLAS and W. E. THOMAS have been appointed surgeons to take the place of Dr. Paul Tindall on the Big Four Railroad. While there has been only one surgeon doing this work, it was decided to divide the work among three.

ACCORDING to plans completed by Secretary Hoover several hundred nurses will be recruited in the United States for the purpose of aiding in giving American relief to Russia's needy children. It is expected that, for the most part, these will be selected from the number who saw service in France.

THE Agricultural Department of Purdue University has furnished valuable ideas and instructions to the State of Indiana concerning bovine tuberculosis. Already thirteen counties of the

state have launched campaigns against that disease. It is the plan to eliminate all tuberculosis in beef and dairy cattle.

DR. KATHRYN M. WHITTEN, of Fort Wayne, and Dr. A. H. Unthank, a dentist of Marion, were married August 24, 1921, at their home which they recently purchased in Fort Wayne. Dr. and Mrs. Unthank will continue their practices in their combined offices at 343 West Wayne street, Fort Wayne.

THE Whitley County Council has appropriated a thousand dollars for the purpose of building two portable cottages for the care of tuberculosis patients and to aid in carrying on the nurses' services. A plan is also under consideration for paying for the upkeep of five beds at the Irene Byron Hospital at Fort Wayne.

THE Tri-State District Medical Society has issued an invitation to the physicians of Indiana to attend its annual assembly which is to be held at Milwaukee, Wisconsin, November 14th, 15th, 16th and 17th. There will be addresses by many well known doctors. Dr. Charles P. Emerson, of Indianapolis, will present a paper on "The Treatment of Chronic Nephritis".

THE Indiana State Nurses' Association, together with the hospitals and Red Cross, are developing a movement to stimulate interest in the nursing profession. The state will be divided into districts and a very complete program will be carried out in each community. The number of trained nurses in this country has been greatly decreased and it is hoped that this campaign will help to bring this number back to its full strength.

A POSTGRADUATE course in anatomical and operative surgery on the head and neck will be offered by the Indiana University School of Medicine at Indianapolis, beginning October 24, 1921. The course will be conducted by Dr. John F. Barnhill, Professor of Rhinology, Otolaryngology and Laryngology. Further particulars regarding this course may be obtained from the Registrar, Indiana University School of Medicine, Indianapolis, Indiana.

THE members of the Indianapolis Board of Park Commissioners have announced that ground lying between the Robert W. Long Hospital and the City Hospital, facing the proposed site of the Riley Memorial Hospital for Children, will be acquired by the park board for use as a convalescent park. It has been pointed out that establishment of the three hospitals in close proximity will result in economical operation through combined facilities.

THE American Hospital Association held its annual meeting at the West Baden Springs Hotel, West Baden, Indiana, September 12-16. Papers were presented by Dr. Haven Emerson on the Bureau of War Risk Insurance; Dr. Malcolm T. MacEachern, on "What Constitutes Good Service to the Public"; Charles S. Woods, on "The Development of Good Professional Work in the Hospital"; Franklin Martin, on "The Work with Hospitals by the American College of Surgeons"; and a paper by Dr. Franklin R. Nuzum on "A Method for Increasing Medical Efficiency Within the Hospital". The president for the next year is Dr. George O'Hanlon, superintendent of Bellevue Hospital, New York.

THE memorial to be erected to Dr. John B. Murphy, noted doctor and teacher, is to be in the form of a beautiful building which will be dedicated to the service of the American College of Surgeons of which Dr. Murphy was a founder. Mrs. John B. Murphy recently passed away, leaving \$100,000.00 in support of the memorial conditional upon the entire \$500,000.00 being raised and the proposed building begun within a limited time. Therefore, special efforts are being put forth to obtain the remaining \$300,000.00, \$200,000.00 already having been received. Doctors are especially urged to contribute to this worthy memorial and all contributions will be welcomed. Address Dr. John B. Murphy Memorial Association, Room 1314, 30 North Michigan Avenue, Chicago.

THE Eleventh District Medical Association will hold its annual meeting at the Marion National Sanatorium, Marion, Indiana, Oct. 20, 1921. The following program will be carried out:

From 11 A. M. to 12:30 P. M.—Clinics at the Marion National Sanatorium, by Dr. Wm. MacLake, Medical Director and Superintendent.

2:30 P. M.—Inspection of hospitals and laboratories under guidance of Sanatorium staff. Business session and Scientific Program.

The following papers will be presented: "Ectopic Pregnancy," by Dr. C. H. Good, Huntington; discussants—Drs. G. G. Eckhart and Wallace Grayston; "The Management of Nephritis," by Dr. Wm. A. Jenkins, Louisville, Ky.; "The Place of the Public Nurse," by Dr. James Wilson, Wabash; discussants—Drs. J. H. Reed and E. O. Daniels.

AN Institute on the Nutrition Problems of Children will be held at Indianapolis for two weeks, beginning October 24, 1921. It will be

conducted by Dr. William R. P. Emerson, of Boston, and will be under the auspices of the Marion County Tuberculosis Association. The institute will be open to all teachers, nurses, dietitians, social workers and other interested people.

The entire time of the students will be taken up by the institute for the two weeks, and lectures will cover the various phases of nutritional work. Actual demonstrations will be presented in the nutrition classes which will be organized in the Indianapolis schools before the institute begins, and these classes will be continued throughout the school year. Special lectures will be arranged for late in the afternoon or evening with the cooperation of Parent-Teacher Associations, Women's Clubs, etc. There will be no admission fee to these lectures. The total cost of the Institute, including tuition fee, will be twenty-five dollars. A reduced fee of ten dollars is made to people of Indianapolis and Marion County.

Further information may be secured from the office of the Marion County Tuberculosis Association, 1138 Pythian Building, Indianapolis, Indiana.

DURING September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

The Abbott Laboratories: Procaine-Adrenalin Hypodermic Tablets No. 2.

Dry Milk Co.: Protolac.

Hynson, Westcott & Dunning: Tablets of Benzyl Succinate—H. W. and D.

Intra Products Co.: Ampules Ven Sterile Solution Mercury Oxycyanide 0.008 Gm. Ampules Ven Sterile Solution Mercury Oxycyanide 0.016 Gm.

Lederle Antitoxin Laboratories: Acne Combined Vaccine.

Mead, Johnson & Co.: Casec.

N. Y. Intravenous Laboratory: Loeser's Intravenous Solution of Mercury Oxycyanide.

Seydel Mfg. Co.: Benzyl Succinate—Seydel. Nonproprietary Articles: Benzyl Succinate. Calcium Caseinate.

THE Indiana University School of Medicine announces a postgraduate course in blood chemistry, methods of testing kidney function, acidosis, and basal metabolism, to occupy a period of about ten evenings, for physicians of Indianapolis and the vicinity. The laboratory of the Medical School building will be open for this purpose on Thursday evenings from 7:00 till 10:00 o'clock throughout the coming year, commencing October 27. The principal subjects to

be covered will be determination of urea in the blood, relation between urea excretion and blood urea concentration as expressed by Ambard and others, determination of creatinine, uric acid, and sugar in the blood, detection of acidosis and determination of alkaline reserve, determination of alveolar carbon dioxide and measurement of basal metabolism. Short explanatory lectures will be given at intervals, but the work will be chiefly of a practical character, provision being made for each member of the class to carry out analyses himself. The course is to be conducted by B. B. Turner, professor of pharmacology and biochemistry, assisted by Hobart Rogers, associate.

THE National Board of Medical Examiners has just completed the first five years' work and with it the trial period of its usefulness. The principle which this Board has stood for, namely, the establishment of a thorough test of fitness to practice medicine which might be safely accepted throughout this country and abroad, has been widely accepted. Since this Board was organized by Dr. W. L. Rodman, in 1915, eleven examinations have been held. These examinations have been conducted on the plan of holding at one sitting a written, practical and clinical test for candidates with certain qualifications, namely, a four-year high-school course, two years of college work, including one year of Physics, Chemistry, and Biology, graduation from a Class *A* Medical School and one year's internship in an acceptable hospital. These examinations have covered all the subjects of the medical school curriculum and have been conducted by members of the Board with members of the profession resident in the place of examination appointed to help them. Such examinations have been held in Washington, Philadelphia, New York City, Boston, Chicago, St. Louis, Rochester (Minnesota) and Minneapolis. During the war a combined examination was held at Fort Oglethorpe and Fort Riley. There have been 325 candidates examined, of whom 269 have passed and been granted certificates.

Starting with the endorsement of the Council on Medical Education of the American Medical Association, American Medical College Association and various sectional Medical Societies, the recognition of the Army, Navy and Public Health Service Medical Corps of the United States and certain State Boards of Medical Examiners, the certificate is now recognized. Also by twenty states as follows: Alabama, Arizona, Colorado, Delaware, Florida, Georgia, Idaho, Iowa, Kentucky, Maryland, Minnesota, Nebraska, New Hampshire, New Jersey, North Carolina, North Dakota, Pennsylvania, Rhode

Island, Vermont, and Virginia, the Conjoint Board of England, the Triple Qualification Board of Scotland, the American College of Surgeons and the Mayo Foundation of the University of Minnesota.

There has been such a wide-spread demand for an opportunity to secure this certificate by examination that the Board has now adopted and will put into effect at once, the following plan: Part I, to consist of a written examination in the six fundamental medical sciences: Anatomy, including histology and embryology; Physiology; Physiological Chemistry; General Pathology; Bacteriology; *Materia Medica* and Pharmacology. Part II, to consist of a written examination in the four following subjects: Medicine, including pediatrics, neuropsychiatry, and therapeutics; Surgery, including applied anatomy, surgical pathology and surgical specialties; Obstetrics and Gynecology; Public Health, including hygiene and medical jurisprudence. Part III, to consist of a practical examination in each of the following four subjects: Clinical Medicine, including medical pathology, applied physiology, clinical chemistry, clinical microscopy and dermatology; Clinical Surgery, including applied anatomy, surgical pathology, operative surgery, and the surgical specialties or the diseases of the eye, ear, nose and throat; Obstetrics and Gynecology; Public Health, including sanitary bacteriology and the communicable diseases.

Parts I and II will be conducted as written examinations in Class *A* Medical Schools and Part III will be entirely practical and clinical. In order to facilitate the carrying out of Part III subsidiary boards will be appointed in the following cities: Boston, New York, Philadelphia, Minneapolis, Iowa City, San Francisco, Denver, New Orleans, Baltimore, Galveston, Cleveland, St. Louis, Chicago, Washington, D. C., and Nashville, and these boards will function under the direction of the National Board. The fee of \$25.00 for the first part, \$25.00 for the second part and \$50.00 for the third part will be charged. In order to help the Board the Carnegie Foundation has appropriated \$100,000 over a period of five years.

At the annual meeting, held June 13th of this year in Boston, the following officers were elected: M. W. Ireland, Surgeon General, President; J. S. Rodman, M.D., Secretary-Treasurer; E. S. Elwood, Managing Director.

Mr. Elwood will personally visit all Class *A* Schools during the college year to further explain the examination, etc., to those interested. Further information may be had from the Secretary-Treasurer, Medical Arts Building, Philadelphia.

CORRESPONDENCE

JOHNS HOPKINS ON SURGICAL FEES

Cincinnati, Ohio, Sept. 6, 1921.

Editor of THE JOURNAL:

In the August issue of "The Journal of the Indiana State Medical Association," under Editorials on page 271, I found a short article entitled "Johns Hopkins Decision Concerning Surgical Fees".

In commenting on this article I beg to state that I agree with every word of it and am sure every other sane thinking physician does likewise. I only wish that other medical journals had the same courage to go after the "big fish" when the occasion demands.

I always have enjoyed reading your editorials and admire your courage in saying just what you think, and hope that you will continue along the same lines.

Sincerely yours,

C. J. BROEMAN, M.D.

CHRISTIAN SCIENCE

Chicago, Ill., Sept. 3, 1921.

Editor of THE JOURNAL:

I have just finished reading your editorial on "Christian Science" and hasten to express my appreciation of your attitude toward this pseudo-religious medical fake. There are some near-sages who assert that deceit thrives on opposition. Any successful pick-pocket is more than willing to be let alone, and the "Christian Science" pick-pocket is no exception. Fitting publicity is all that is required to counteract the mysterious fanaticism of the Eddyites. It is useless to expect the lay press to take any sensible stand in the matter, as members of this cult have hounded the newspapers into subjection. For a number of years I have been convinced that this baby-killing cult should be given the benefit of the spotlight. Every case of death due to neglect should be thoroughly aired; and where possible have it generally known who is responsible for the untimely death.

I trust your able excoriation of the praying pick-pocketers will be emulated.

Sincerely yours,

CHAS. E. HUMISTON (M.D.)

(President Illinois State Medical Society)

PRAISE FOR THE JOURNAL

Brazil, Indiana, Sept. 2, 1921.

Editor of THE JOURNAL:

As a member of the Indiana State Medical Association, I wish to express hearty appreciation of your work in editing THE JOURNAL. This year's issues have been the best yet, and while the scientific papers contributed by members have been of a high order of merit, your own editorial notes and leaders also have shown a sustained excellence and timeliness.

The series of articles by Dr. Frank B. Wynn is a most praiseworthy one, and quite remarkable for its fearless frankness in dealing with some more or less common shortcomings of members of our own profession. Your leading editorial this month on Christian Science is very much to the point, and the sentiments there expressed should be widely distributed among both profession and laity.

However, one of your notes intimating that the Indiana State Board of Health is about to be reorganized, leaving out the present Regulars and their influence, rather mystified some of us as to its possible hidden meaning. Of course we know that just lately there have been rumors as to some members and employees receiving double pay in some way, and the insinuation that probably city and county health officers were getting a wartime graft from Federal sources, etc. Local health men WERE asked to do a lot of extra work and the demand still continues, but all the time with no EXTRA REMUNERATION WHATEVER. I only hope that in reorganizing the State Board, if found necessary, that men of high ideals and strict integrity as well as high professional standing can be induced to take the management.

Very truly yours,

GEORGE W. FINLEY, M.D.,

County Health Commissioner.

APPROVAL FROM CALIFORNIA

San Francisco, Cal., Sept. 27, 1921.

Editor of THE JOURNAL:

I have received the extra copies of your Journal which we requested, and wish to thank you for the courtesy extended.

We have been particularly interested in the editorials. It is a pleasure to note that you are up and doing in your part of the world. We are trying to do the same.

Sincerely yours,

W. E. MUSGRAVE,

Secretary, California State Medical Society.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph.....	t. B. Dugdale.....	75	87
2.	Franklin	J. M. Glaser.....	8	10
3.	Adams	L. E. Somers.....	11	14
4.	Carroll	Eva N. Kennedy.....	20	24
5.	Hendricks	W. T. Lawson.....	16	19
6.	Kosciusko	W. B. Siders.....	26	32
7.	Lawrence	F. S. Hunter.....	21	26
8.	White	H. B. Gable.....	10	11
9.	Jasper-Newton	O. E. Glick.....	24	27
10.	Orange	J. I. Maris.....	16	19
11.	Owen	Allen Pierson.....	9	11
12.	Wabash	Earl J. Cripe.....	26	30
13.	Pike	S. R. Clark.....	12	13
14.	DeKalb	M. E. Klingler.....	20	27
15.	Washington	Irvin Huckleberry.....	5	13
16.	Clark	Austin Funk.....	2	17
17.	Clay	H. L. Hirt.....	17	19
18.	Allen	Miles F. Porter, Jr.....	95	105
19.	Greene	W. R. Cravens.....	16	18
20.	Henry	C. E. Canaday.....	25	29
21.	Switzerland	R. M. Copeland.....	7	8
22.	Fulton	A. E. Stinson.....	15	17
23.	Jay	C. A. Paddock.....	18	20

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

BEEBE PROTEIN MILK.—EDWEISS MILCH OF FINKELSTEIN.—A modified milk preparation having a relatively low content of carbohydrate and fat and a relatively high protein content. Each 100 Gm. contains approximately solids 10.2 Gm., carbohydrate 2.5 Gm., protein (casein) 5.3 Gm., fat 1.6 Gm., and ash 0.8 Gm. The acidity is stated on each package. The high protein content of protein milk is claimed to act as a preventive of fermentation and to serve as a medium in which a change in the intestinal flora takes place. Protein milk is said to be especially indicated in gastro-intestinal disorders of infants, accompanied by fermentation and diarrhea. Beebe Laboratories, Inc., St. Paul, Minn.

BEEBE MODIFIED BUTTERMILK.—Buttermilk with Flour.—Buttermilk modified formula of Langstein and Meyer.—Buttermilk containing flour partially dextrinized by heat.—Each 100 Gm. contains approximately total solids 9.7 Gm., carbohydrate 4.7 Gm., protein 3.3 Gm., fat 0.6 Gm., and ash 1.2 Gm. The acidity is stated on each package. Beebe Modified Buttermilk is offered as a means of combating intestinal fermentation by modifying the intestinal flora. Since it contains several forms of carbohydrates which have different periods of digestion, it is believed to afford an opportunity of assimilation without overtaxing the digestive powers. It is stated to be indicated in digestive disturbances of children and adults characterized by milk dyspepsia, fat intolerance, eczema and vomiting. Beebe Laboratories, Inc., St. Paul, Minn.

MERCURIC OXYCYANIDE.—For a description see New and Nonofficial Remedies 1921, p. 194. Mercuric Oxy-cyanide has been proposed as a substitute for mercuric chloride. Its antiseptic power is said to be greater and it is claimed to be less irritating than mercuric chloride because it does not act on albumin to the same extent. Representative syphilographers differ as to the use of mercuric oxycyanide intravenously. Some believe that its use should be limited to hospitals; others that it has no advantage over other and safer methods of administering mercury, while others consider it safe and valuable. But all are in accord that its safe use requires experience. Mercuric oxycyanide may be administered subcutaneously, intramuscularly or intravenously in the same doses as mercuric chloride.

LOESER'S INTRAVENOUS SOLUTION OF MERCURY OXYCYANIDE.—Each ampule contains 5 Cc. of solution, representing 0.008 Gm. mercuric oxycyanide, N. N. R. New York Intravenous Laboratory, New York.

AMPULES VEN STERILE SOLUTION MERCURY OXYCYANIDE, 0.008 GM.—Each ampule contains 5 Cc. solution, representing 0.008 Gm. mercuric oxycyanide, N. N. R. Intra Products Co., Denver, Colo. (*Jour. A. M. A.*, Sept. 10, 1921, p. 863).

AMPULES VEN STERILE SOLUTION MERCURY OXYCYANIDE, 0.016 GM.—Each ampule contains 5 Cc. solution, representing 0.016 Gm. mercuric oxycyanide, N. N. R. Intra Products Co., Denver, Colo. (*Jour. A. M. A.*, Sept. 10, 1921, p. 863).

CALCIUM CASEINATE.—*Calci Caseinas.*—Casein from cow's milk, rendered partially soluble by combination with calcium and containing not less than 1 percent of calcium. The diarrheal diseases of infancy are now generally treated by dietetic measures. A useful food may be made from the curd of milk and diluted buttermilk, the resultant mixture containing a moderate amount of fat, a small amount of sugar and a large amount of protein (casein) and salts, particularly salts of calcium. A mixture of calcium caseinate and milk is also used. For children, calcium caseinate is mixed with milk and water or milk and gruel in the proportion of 10 Gm. calcium caseinate and one pint of the liquid and the mixture boiled. Calcium caseinate is a yellowish powder, free from rancid or sour odor. With warm water it forms a turbid suspension. Calcium caseinate must not contain more than 10 percent of moisture, nor more than 2.5 percent of fat and not less than 14 percent of nitrogen.

CASEC.—A brand of calcium caseinate, N. N. R. Mead, Johnson & Co., Evansville, Ind.

BENZYL SUCCINATE.—*Benzylis Succinas.*—The dibenzyl ester of succinic acid. Benzyl succinate lowers the tone of unstriped muscle, its action being similar to benzyl benzoate in this respect. It is superior to benzyl benzoate in being less irritating, less nauseating and in containing a greater proportion of benzyl radicle. Its use has been suggested as a renal, biliary, uterine and intestinal colic, excessive intestinal peristalsis, dysmenorrhea, hiccup and other spasms of unstriped muscle. Its clinical use is still in the experimental stage. The dose is 0.3 to 1.0 Gm. Benzyl succinate is a crystalline, odorless and almost tasteless powder. It is almost soluble in water, but soluble in alcohol.

TABLETS OF BENZYL SUCCINATE.—H. W. and D.—Each contains benzyl succinate, N. N. R., 5 grains. Hynson, Westcott & Dunning, Baltimore.—(*Jour. A. M. A.*, Sept. 25, 1921, p. 1023).

PROPAGANDA FOR REFORM

THYROID IN OBESITY.—J. H. Means carried out studies which show that the basal metabolism is normal in cases of simple obesity. The wide-spread treatment of obesity by the administration of thyroid preparations is a device for raising metabolism to an abnormal level. The treatment of simple obesity by producing a state of hyperthyroidism has recently been designated as pernicious by Means. Simple obesity can now readily be differentiated from the obesity due to endocrine disorders by determination of the basal metabolism. If this is normal, weight reduction should not be attempted by the use of thyroid.—(*Jour. A. M. A.*, Sept. 3, 1921, p. 792).

MAGHEE'S EPILEPSY TREATMENT.—This is sold on the mail-order plan by Thomas G. Maghee, M.D., Lander, Wyo. The product is advertised with the claim that it stops all seizures from the first day of its use. A five dollar size package containing 40 capsules was submitted to the A. M. A. Chemical

Laboratory for analysis. The examination indicated that each capsule contained about 1 grain phenobarbital (luminal), $\frac{1}{2}$ grain charcoal and a little bismuth subnitrate. There is no rational excuse for the sale of phenobarbital (luminal) in a secret mixture sold for the self treatment of epilepsy.—(*Jour. A. M. A.*, Sept. 24, 1921, p. 1037).

THE EXPENSIVE "POOR MAN'S MEDICINE."—A favorite argument of the nostrum exploiters, advanced when threatened with restrictive legislation or taxation, is that "patent medicines" are the poor man's medicine. Never had a pretension a flimsier basis of fact. The purchaser who buys a bottle of Dr. Quack's Quick Cure does not realize that about 75 cents of his dollar has been expended by Dr. Quack in an effort to convince him that he is suffering from something for which "Quick Cure" is a sure-shot remedy. The abolition of "patent medicine" advertising would do much to abolish the making of hypochondriacs by suggestion and would result in a great decrease in all drug taking. In addition, if John Doe purchased a simple home remedy, he would have to pay for the cost of the medicine only and not for an expensive advertising campaign to promote its sale.—(*Jour. A. M. A.*, Sept. 10, 1921, p. 867).

DIPHTHERIA PREVENTIVE MEASURES.—It seems likely that the securing of widespread immunity is to be an important aim in the prevention of diphtheria. In this work the Schick test, whereby the existence of immunity or susceptibility to diphtheria can be determined with ease and precision, seems destined to play an important part. Thousands of tests have been applied to school children of New York. Further, in the recent test of more than 52,000 school children of New York, those who gave a positive test were injected with toxin-antitoxin mixture to secure active immunization. If the medical profession accepts the contention that the Schick test is a reliable indication of the susceptibility to diphtheria and, further, that the currently proposed methods of toxin-antitoxin injections are effective in developing a lasting immunity, a great step in progress will have been made.—(*Jour. A. M. A.*, Sept. 24, 1921, p. 1025).

A NEW SELENIUM CANCER CURE.—Medical journals have received "news items" from the "Medical News Bureau" (D. E. Woolley, manager) which announce that for the purpose of further developing methods of control and treatment of disease by the use of selenium and tellurium, the Basic Cancer Research has been organized and a laboratory established at 847 Union St., Brooklyn. Newspapers, on the other hand, have received free publicity matter from the Cosmopolitan Research Society (D. E. Woolley, secretary) according to which this society has been founded to investigate and develop methods for the treatment of cancer. It is further stated that "Dr. Frederic Klein, the eminent authority on urology and the chemistry of cancer, has evolved a new colorimetric test which is the most wonderful and valuable discovery in the diagnosis of cancer and various other diseases". Klein is the gentleman who made "Sulpho-Selene", a cancer "cure" which the Council on Pharmacy and Chemistry refused recognition some years ago. Is "Sulpho-Selene" to be resurrected?—(*Jour. A. M. A.*, Sept. 3, 1921, p. 805).

The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Mott's Compound Female Pills (Williams Manufacturing Co.), consisting essentially of aloes, ferrous sulphate and cantharides and falsely claimed to restore the menstrual flow and to be beneficial in female disorders. Job Moses, J. Clarke's Female Pills (Williams Manufacturing Co., and Eastern Drug Co.).

(Continued on Adv. page xviii)

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BALTIMORE

(Continued from page 370)

consisting essentially of aloes, a salt of iron and oil of peppermint, falsely claimed to be good for many painful and dangerous female disorders. Gono Capsules 761, Renol Capsules, and Gonna Specific (Grape Capsule Co.), capsules containing salol, oleoresin of cubebs, copaiba balsam, pepsin, cottonseed oil and plant extractives and falsely labeled as remedies for "Gonorrhea, Gleet and All Kidney and Bladder Troubles". Haskin's Nervine (Haskin Medicine Co.), a solution of Epsom salt, sweetened, flavored and colored, and asserted to be the great nerve and blood purifier and for the treatment of a very long list of disorders.—(*Jour. A. M. A.*, Sept. 17, 1921, p. 958).

TREATMENT OF "HAY FEVER".—Although the essential features of the etiology of "hay fever" are believed to be understood, the treatment is still largely of the hit or miss type. Preparations of mixed pollens are distributed by commercial houses and used by physicians in the hope that some ingredient will prove to be potent. Several facts seem at length to be so well established that they may serve almost as axioms in the clinic of hay fever. One of these is that although the offending pollens vary in different parts of the world as well as at different seasons, the number chiefly responsible for the attack in any single locality is comparatively small. Hence it becomes the duty of the physician to familiarize himself with the offending pollens in his locality or the locality whence his patients hail. Fortunately I. C. Walker has reported on the pollens which are responsible for "hay fever" in the New England states; G. Selfridge on those in California; K. K. Koessler for Illinois, and W. Scheppegrell for the Southern states. It is important that for each case of "hay fever" the offending pollen should be determined by skin tests and also that the treatment should be preseasonal (although treatment during the season may sometimes benefit). In extenuation of the frequent failure to relieve patients, it is to be noted that certain persons have symptoms ranging from sneezing to asthmatic attacks due to the odors of flowers that have no pollen as well as to the presence of nonspecific factors in the respired air. Obviously, pollen extracts are of no avail in such cases.—(*Jour. A. M. A.*, Sept. 3, 1921, p. 791).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Equinox Lithia Water (Equinox Mountain Spring Co.), falsely claimed to be a natural mineral water. Antilaiteuse (Dr. N. A. Sirois), consisting essentially of Epsom salt and ground juniper berries falsely claimed to be able to cleanse and relieve the body and blood of all poisonous impurities. Madam Dean's Female Pills (Martin Rudy), consisting essentially of quinine, aloes, ferrous sulphate, hydrastis, ginger and cornstarch, falsely claimed to give relief in female disorders. Donaldson's Wonderful New Life Remedy (T. Donaldson Medicine Co.), essentially an alkaline solution containing Epsom salt, senna, plant extractives, alcohol and small amounts of volatile oils, falsely claimed to be one of the greatest kidney medicines in the world. Prescription 999 (Combination Remedy Co.), a mixture of fixed and volatile oils, including oils of sandalwood, nutmeg and copaiba, and falsely labeled as a remedy for gonorrhea or gleet. Kellogg's Sanitone Wafers (F. J. Kellogg Co.), containing salts of iron and chromium, a laxative plant extractive, red pepper and a trace of strychnine, sold under the false claim that locomotor ataxia is curable with chromium sulphate. Acme Brand Pennyroyal Pills (S. Pfeiffer Mfg. Co.), con-

sisting of aloes and oil of pennyroyal and tansy, sold under claims usual to nostrums for the alleged cure of suppressed menstruation. Cadomene Tablets (Blackburn Products Co.), consisting essentially of zinc phosphide, strychnine and iron salts and recommended for neurasthenia, general debility, melancholy, etc. Leonard's Injection No. 1 (S. D. Leonard & Co., Inc.), essentially an alkaline solution of borax, camphor and berberin, and falsely claimed to be an effective remedy for gonorrhea and gleet. Dr. J. H. McLean's Sarsaparilla Compound (Dr. J. H. McLean Medicine Co.), a "blood purifier" consisting essentially of iodides, a laxative plant drug, saponin (sarsaparilla), plant extractives, salts of iron, potassium, and sodium, sugar, alcohol, and water.—(*Jour. A. M. A.*, Sept. 10, 1921, p. 879).

TREATMENT OF TUBERCULOSIS OF THE ANKLE IN AN ADULT

The prognosis of tuberculosis of the ankle in the adult with conservative treatment, according to F. J. Gaenslen and C. C. Schneider, Milwaukee (*Journal A. M. A.*, Oct. 8, 1921) is poor. In the present series no case of astragalotibial disease was treated conservatively, the only nonoperative case reported being one of the subastragalar disease. The duration of conservative treatment in the cases terminating favorably, according to the only statistics referring to adults, is four years. A six months' period of conservative treatment will probably be sufficient to determine efficiency of this form of treatment. In cases in which operation is performed early it is probably safe to say that the patient will return to work in between one and two years. Statistics show that amputation and also death from other forms of tuberculosis is far too frequent because conservative measures are persisted in for too long a period. In further reports, separation of cases into adult and childhood groups is urged.

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- 1 Blue Glass Disc
- 1 Frosted Glass Disc
- 1 Metal Disc
- 1 Hand Power High Speed Centrifuge, complete with tubes and shields
- 1 Large Test Tube Rack
- 12 Assorted Test Tubes
- 1 Test Tube Brush
- 12 Micro Glass Slides
- 50 Micro Cover Glasses
- 5 Assorted Watch Glass
- 1 pr. Slide Holding Forceps
- 1 Coplin Staining Jar
- 1 Alcohol Lamp
- 1 Pipette, 1cc (mil)

- 1 Pipette, 10cc
- 1 Wire Loop, for smears
- 1 Package of Lens Paper
- 1 Package Filter Paper
- 1 Erlenmeyer Flask, 4 oz.
- 1 Urinometer and Jar
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NOVEMBER 15, 1921

NUMBER 11

ORIGINAL ARTICLES

MEDICINE AND STATE CONTROL

DR. DAVID ROSS,
INDIANAPOLIS, INDIANA

Probably no question interests the medical profession more than the proper relation of the State to the practice of medicine. Certainly the powers that grant privileges should retain the right to say what shall be the conditions under which these privileges are used. The present status of the State to the education of physicians and the practice of medicine in all of its phases has been a slow evolution in which certain fundamental principles have been established. It is a long cry from the early standards of medical practice, not only in Indiana but in all the states, to the standard of today, and we may rightly claim that we have one standard throughout our country because of the uniform requirements in all states. State control of the education of medical students, and a standard agreed upon by members of the several colleges, make this possible and certain because the requirements of the men who practice the healing art not only may but must be the same no matter where the art is practiced. Education is eminently one of the functions of the State in its relation to medicine, nor does that education necessarily end with the fitting of the student for his life work, but may legitimately be extended to propaganda which informs and educates the public in all matters pertaining to hygiene, affecting not only the individual, but especially when through the individual the community at large is affected.

Prophylactic medicine must always be a function of the State. Improper hygienic conditions or carelessness in the quarantine regulations of any person or locality is a menace to all, and that which affects the welfare of all citizens must be dictated and controlled by the only power that has authority over all the people. It cannot be left to the individual opinion or whim.

Those mentally and morally deficient must have State care. Not simply that these unfortunates must be cared for in the most efficient way possible, but because the welfare and safety of all citizens demand it. To these we may add the indigent from whatever cause, because they are a public charge and for humanity's sake must be cared for. But I think I may safely say that outside of these latter classes when the State in any form undertakes the practice of medicine and cure of disease among its citizens in private life, it has gone beyond that which is best for the progress of the science and art of medicine, and for those who should be served and benefited by it.

Some have likened the State in the practice of medicine to its function in education, but the one is of general interest and moment in a large sense, while the treatment of disease is primarily and almost wholly an individual matter. In all matters pertaining to the citizen's individual and family life he must be left as free as in matters of conscience and religion, and restricted only when it affects the general good.

The American citizen is sometimes called a faddist, and one of his fads is to fly to legislation to cure any and all ills that exist. Wise, sane, needful legislation is a great aid to betterment of conditions, but unless the need precede the legislation, and we, the people, be sufficiently educated to see the need and demand the remedy, mere legislation is worse than useless.

In 1883 Bismarck caused to be legally adopted in Germany compulsory health insurance, to appease the clamor of the proletariat and thereby strengthen the monarchical form of government. It doubtless temporarily, at least, accomplished his purpose. Statistics do not prove that it was of lasting good to those supposed to be served by it.

If compulsory insurance or state medicine is needed it must be shown that a considerable number of people are not getting and cannot get proper medical and surgical care under existing conditions; that too much sickness exists; that time lost by sickness is greater than should be under proper conditions, and consequently

*President's address presented at the Indianapolis session of the Indiana State Medical Association, September, 1921.

unnecessary suffering, needless loss of time, causing too great financial loss to employer and employed. Its continuance can only be justified by its alleviating or curing these conditions. It does not follow that because conditions are not ideal as they exist, that they will be so if free medical and surgical treatment are provided for each individual. In fact, something for nothing or without due effort on the part of the recipient is a curse rather than a blessing. A committee having the matter in hand estimated it would cost seventy million dollars to carry out the provisions of such a measure, compulsory health insurance, in Illinois. Such a drain on the resources of a state can only be justified by the lessened morbidity and mortality. Have such results maintained where such measures have been tried?

If we compare those European countries where such methods have been tried we not only find their sickness and death rate greater than those around them, who do not have compulsory insurance, or state controlled practice of medicine, but that matters are worse with them than before the advent of such methods. Quoting from an address by Dr. Chas. J. Whalen: "Not only do the wage-earners of Germany and Austria lose more time through sickness under compulsory health insurance laws than in the United States without such laws, but it is also interesting to note that it has produced in the habits of the German and Austrian workers a tendency to become sick, to imagine they are sick, or to make believe they are sick. The figures are illuminating. In Germany out of every 1000 insured wage-earners 36.7 were listed as sick in 1890, and 45.6 in 1913. In Austria the corresponding figures were 45.7 in 1890, and 51.8 in 1913. In Germany the average number of days for each sick member increased from 16.2 in 1890 to 17.4 in 1913. The average number of days' sickness per insured member, which was 5.9 in Germany in 1885 when the law had just gone into effect, increased to 6.19 in 1890 and 9.19 in 1913, while the Austrian statistics from 1890 to 1913 show an increase from 7.98 to 9.45 days. Not only did the duration of sickness per person increase, but more persons were reported sick in Germany and Austria in 1913 than in 1890, showing compulsory health insurance laws did not prevent sickness, nor minimize its duration and, therefore, did not promote efficiency."

"In 1912 the death rate in Germany was 15.6 per thousand population. In Austria 20.5, and in Hungary 23.3. Now compare these figures with the mortality ratio in several countries which had no compulsory health insurance laws in effect. In the same year the death rate in Australia was 11.2; in New Zealand, 8.9; in Sweden, 14.2; in Switzerland, 14.1; in Belgium,

14.8; in Denmark, 13; in The Netherlands, 12.3; and in the United States 13.9, which was further reduced in 1915 to 13.5."

"This low rate was obtained despite the fact that the ordinary tendency to disease is aggravated by a great variety of climates in the United States, by diversity of races represented in our population and the fact that the United States has kept its doors open to millions of immigrants unused to our changes of climate; many of them wasted by toil and privation in their homeland."

Hon. Francis Neilson, ex-member of British Parliament, a student of political economy, speaking before the Chicago Medical Society in December, 1916, said that social insurance in England is a dismal failure. He says one has but to investigate all conditions to prove it. Under the laws the people are entitled to the best medical service money can buy, but in countries which have adopted compulsory health insurance they are getting the worst medical service in the world.

Alfred Cox, M.B.B.S., Medical Secretary of the British Medical Association, in a series of articles in May 7, 14 and 21, 1921, of the *A. M. A. Journal*, brings Britain's experience with national health insurance up to date under the title of "Seven Years of National Health Insurance in England". (A Retrospect.)

He evidently tries to state the matter very completely and fairly. He urges the consent and cooperation of a large majority of the doctors wherever the plan is tried. That without aid and cooperation of the parties most concerned the plan must be a failure. England's funds are provided from the three-fold source: The regular payment by the head of the house benefited, the company in whose employ he is, and the government. His report as a whole is favorable to the system, though he says there is great variety of opinions both among the doctors and the laity. He states that the average doctor engaged in the practice is probably better paid than before compulsory insurance went into effect, because previously to that many of them did contract work at a lower per capita fee than the government pays. That a better feeling exists between the profession and authorities than at first because many of the points of contention have been ironed out and the doctor is getting more recognition in the work than formerly. No statistics are given at any time; all statements are based on the writer's opinion from his own observations. His conclusions in regard to its application to America are against rather than for the system.

He advises that some organized plan should be worked out by the profession and government that those unable to provide their own

medical and surgical care should be more definitely provided for, not leaving it to the unorganized effort and charitable instincts of the doctor at his own expense. He concludes, however, with the statement that unless America has a very large percent who are unable to provide for themselves it should not be tried on this side of the water.

I have quoted two men probably alike competent, from different angles, to express an opinion, probably both alike sincere, and yet widely different conclusions are reached as to local effects. May I not emphatically suggest that we must take into consideration the wide difference in conditions in America and even in England, probably the most favored of European countries. What will appear good to a Briton will not satisfy an American. Such arrangements are un-American. The glory of America has been freedom for all within her borders and that freedom as absolute as consistent with good government, and the rights of others. Since the sailing of the Mayflower till the present day men have sought our shores that they and their families might enjoy a freedom Europe did not offer. Not only a freedom that the early pioneers sought (to worship God according to the dictates of their conscience), but a freedom to win and enjoy by their own efforts all that pertains to man's estate. Are we now going to offer them and their descendants a stone instead of bread, or a venomous something which, if offered and accepted, will at last bite like a serpent and sting like an adder.

Dr. Vaughn says, "There must be a minimum of interference with the relation which has so long existed between the physician and his patient and which, on the whole, has proven so satisfactory to both. The patient must have the right to select his physician, and the physician must have the right to study and prescribe for his patient as he sees fit. The pecuniary reward that comes to the physician must be determined between himself and his patient. There must be no state regulation in these methods. The panel system, as employed in England, is good for neither physician nor patient. There must be no state appointed doctors to administer to the needs of those who are able to pay medical fees."

"In armies it is necessary to have medical officers, and those over whom they are placed must accept the services of such medical officers whether they like it or not. We admit this is essential in military organizations, but we believe that such a practice would be harmful in civil life, and would lead to deterioration on the part of medical men and to discontent on the part of those whom they serve."

All plans for state medicine or compulsory insurance leaves out of consideration one of the most important parts in the practice of medicine—the personal element. They seem to think that medical service can be bought and sold like ordinary merchandise for so many dollars. A father disappointed in the outcome of his son's training and development, complained in his chagrin and disappointment, "Why, I gave him from earliest babyhood everything money could buy." The retort was, "You have failed because you have given him so little money cannot buy." Do you want in any capacity, especially in times of sickness and suffering a time server who gives only what money brings? He is a poor physician who does not give more than his technical skill and his drugs. That element of every good physician which cannot be bought in the marts of trade—that human sympathy and understanding—often turns the tide and saves life and gives happiness that is lasting. Can you expect it to any degree when patients are treated at so much per, because a state chooses some man to do a certain task?

When you rob a man of the right to care for his own you rob him of the most divine and ennobling right that the state or God himself has ever bestowed upon a human being. "He that looketh not after his own and especially those of his own household has denied the faith, and is worse than an infidel." Why force him into such a position?

A claim made in justification of this procedure is that men are not able to supply the money to secure medical services for themselves and family. When that is true conditions are not normal. Either there has been unusual demands or the breadwinner has been unable through sickness or other unusual misfortune to meet such demands.

If there have been no unusual conditions either in the demands or the individual's ability to earn a livelihood, then the question ceases absolutely to be a medical one, and becomes a social or economic one. Then there is no more excuse for giving these families free or partly free medical aid than there is for paying their rent or grocery bill in whole or part, which would at once put them on the pauper list. Any donation in any line is only palliative, not curative.

When any able bodied man under ordinary circumstances cannot care for his dependents, he is either paid too little for his work, or he is putting to poor use the money he earns.

It is impossible to even mention the many objections to this pernicious proposal whether in the form of State medicine or compulsory

health insurance, but to me the most vital is the loss of self-respect that comes to any man when he accepts help and brands himself as a dependent when the thing should come to him as his right in payment for his labor, he soon becomes lethargic and indifferent. The American soldiers were noted for their resourcefulness in times of stress, and that came not from a few months' training, no matter how effective, but because all their lives they had been free, independent citizens, and depending upon their own resources and when the crisis came they met it.

One of the striking things in this discussion is that those supposed to be benefited by such legislation and those most concerned in its enforcement if enacted into law, the laborers and the doctors, do not favor it. James W. Sullivan, Mark A. Daly and Samuel Gompers, in papers read at the 20th annual meeting of the National Civic Federation, January 30th, 1920, at Hotel Astor, all oppose such laws. Samuel Gompers in conclusion said, "But I do want to take this occasion just now to say that it has come to me recently some person has declared that Gompers has been won over to compulsory health insurance. I have already made my answer, which is, that I am unalterably opposed to it."

One of the greatest incentives that a physician or surgeon has is his independence of action, that his success is limited only by his ability. Why should the state in times of peace take this right and demand his services under many restrictions?

You do not need to go to countries where such laws are in effect to learn what it will do for the quality of service given and the general progress of medicine. One of the greatest incentives to labor is the individual recognition and reward. Many may do splendid work for the work's sake, but we all will do better when we add to that the personal reward for personal accomplishment. The quality of service is bound to deteriorate if the state as our taskmaster says, go here or go there.

The challenge of State medicine to every practitioner is better work, more intelligent, conscientious work. Let us look askance on any plan or scheme that takes the control out of the hands of the men who have nobly and loyally served their day. Let no plan, however alluring and attractive, be accepted that robs the physicians of any of their freedom or may lead to the limitation of any of their rights as physicians.

TO LESSEN THE ANESTHETIC RISK

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Since 1847, when chloroform was introduced by Simpson, who regarded it as more portable, more manageable and powerful, more agreeable to inhale, and less exciting than ether, and an agent giving greater control and command over superinduction of the anesthetic state, the medical profession has been divided in its opinion between ether and chloroform as the anesthetic par excellence. Each has had its advocates who could see no virtue in the other, but the surgeon or anesthetist of today who would insist on the use of either ether or chloroform in every case, to the exclusion of the other, shows a lack of knowledge of the therapeutics of these drugs and bases his preference on the fact that he has used one or the other for many years and has never had an accident. Such arguments, mentioned at the beginning of this article, as brought forward by Simpson in his advocacy of chloroform, are absolutely worthless in the selection of an anesthetic, because they do not take into consideration the safety of the patient. The question to be decided by the anesthetist is not whether ether or chloroform is more portable, less exciting, more pleasant to inhale, but in a given individual case which anesthetic is least dangerous to the life of the patient.

Statistics regarding the relative fatality of anesthetics point to greater danger from chloroform than from ether, but all statistics on the subject are unreliable, as it is impossible to exclude contributory causes. There seems no doubt that failure of both heart and respiration, without known cause, are more frequent from chloroform than ether. There is no argument so clinching as this for the universal use of ether except in cases in which ether is positively contraindicated. There is nothing more deplorable than sudden death from an anesthetic given for some minor operation; it is heart breaking to the anesthetist and surgeon and unforgivable by the family of the patient.

It generally is conceded that the after-effects of ether are more marked than those of chloroform; that post anesthetic pneumonia and nephritis are more frequent following ether, though this view is not accepted by all investigators. I believe we can all agree that there is an element of danger in any anesthetic, but that the danger of sudden death from undiscoverable cause occurs more frequently from chloroform. In fact sudden death from ether is a rare occurrence. If we now eliminate the small percent of patients in whom ether is positively contraindicated and choose the anesthetic with the one thought as to which anesthetic presents the minimum risk to the patient, ether will be the indicated agent in the vast majority of cases.

Having selected the anesthetic most suitable to the patient, the anesthetic risk may be reduced further by the selection of an administrator of skill and judgment. I believe that if ether is the anesthetic of choice, and it is administered by a capable anesthetist, the risk of a fatality during the anesthetic state is so remote that it needs little or no consideration.

It is reasonable to believe that any method that will decrease the amount of ether inhaled during an operation will decrease the post-anesthetic danger. The first consideration in this respect is the anesthetist. Doctors who are familiar with patients prior to operation know that in most cases the fear and dread of the anesthetic far exceeds fear of the operation. A person in the grip of this fear will resist the anesthetic, unconsciously fighting against it, and require a large amount of the drug to produce surgical anesthesia. If this fear of the anesthetic can be allayed, the quantity of ether used during the first and second stages of etherization will be lessened materially. This is not a theory but a fact I have observed repeatedly, and I believe will be substantiated by all anesthetists.

It is unfortunate that the anesthetist is frequently a stranger to the patient and is first brought into the patient's presence shortly before the administration, thus being placed at a distinct disadvantage. If the administrator is able to gain the confidence of the patient it will go far in overcoming the nervousness and dread of the anesthetic. It is rather difficult to obtain the proper relation that should exist between patient and anesthetist when they are unknown to each other until shortly before the anesthetic is to be given.

At least a few minutes should be taken to explain to the patient the sensations experienced during the first stage of etherization, instructing him or her how to breathe and to realize how little danger there is from the anesthetic. During the first stage much may be accomplished by talking to the patient and especially concerning the safety of the anesthesia. I believe it was Murray who said that many patients could almost be talked to sleep. But if there is a place to talk during etherization there is also a place to act, a time when the anesthetic must be pushed. Only experience will teach when this point has been reached and it is of the utmost importance that the administrator know this, otherwise the patient is kept in an excited, semi-anesthetized state for an indefinite time, the operation delayed, and the quantity of ether inhaled increased far beyond what is necessary. Surgical anesthesia having been obtained, the object is to keep the patient relaxed on the smallest quantity of ether possible, and again

it is the skill and experience of the anesthetizer that accomplishes the most satisfactory results.

Second in importance to an experienced administrator in producing and maintaining surgical anesthesia on a minimum quantity of ether is the hypodermic use of morphine and atropine prior to the administration. Of course it must be understood that no hard and fast rule can be laid down for the use of these drugs as a preliminary to the anesthetic; each patient coming to operation must be considered individually and idiosyncrasies taken into account, but after eliminating the cases in which morphine and atropine are contraindicated we have an overwhelming percent of patients who will derive a marked benefit from their use, principally because the amount of ether inhaled is less in cases so treated. A brief review of the therapeutics of opium will, I believe, convince the most skeptical of its value in the matter under discussion. I have spoken of the fear so constantly present in patients coming to operation and the part it plays in the administration of an anesthetic. Fear is an emotion of dread. All emotions are agitation of mind or excitement of sensibility depending on nervous reactions. Hare says the dominant action of opium upon man is to produce nervous sedation when given in small doses. In this respect morphine is positively indicated as a pre-anesthetic adjunct. Therapeutic doses of morphine have no effect on the circulation, and if any on respiration act as a feeble stimulant. As to atropine, it stimulates the cardiac muscle and is also a stimulant to the respiratory center, but its chief value when given prior to ether administration is its actions on secretion. Ether causes a free secretion of mucus in the fauces: this excess mucus and saliva soak the gauze of the inhaler which interferes with the proper inhalation of the anesthetic. To a certain extent this excessive secretion can be controlled with atropine. Therapeutically, therefore, we find valid reason for the use of morphine and atropine as a pre-anesthetic measure, and from personal observation and comparison of many cases in which these drugs were and were not given I feel I can state positively that there is a practical benefit from their use in that they shorten the first and second stages of etherization and maintain surgical anesthesia on a reduced quantity of ether.

Let us now consider the use of short term anesthetics in conjunction with ether, and in this respect I wish to make special reference to ethyl chloride. The use of nitrous oxide, ethyl chloride or any short term anesthetic as a preliminary to ether have this to recommend them: that they eliminate the unpleasant first stage of etherization, shorten the second stage and thus lessen the quantity of ether inhaled. All of

which is of distinct advantage to the patient. Of the short term anesthetics ethyl chloride has proved eminently satisfactory for many years in my work, not only as a preliminary to ether but in selected operative cases of short duration, replacing other anesthetic agents entirely. In more than five hundred administrations of ethyl chloride no untoward effects have been noted. It was used in conjunction with ether a comparatively few times, but proved its worth by overcoming the first and shortening or eliminating the second stage of etherization. The large percent of my experience with this anesthetic has been for dental operations, though I have used it repeatedly for short operations of various kinds. The ages of the patients have varied from five to seventy years. Very few dental cases had any preliminary preparation for the anesthetic, yet there were no cases of cyanosis nor any change noted in the circulation. No case showed danger symptoms during the administration, and recovery was rapid. Few patients were nauseated, and in this respect it must be remembered that more or less blood is swallowed during dental operations and that frequently the anesthetic was given shortly after a hearty meal. A stage of excitement is almost unknown; complete anesthesia is reached in an average time of one minute, and with inhaler removed the available time for operating is from one to one and a half minutes. For children it seems a perfect anesthetic for short operations, as the odor is pleasant, it causes no throat irritation, no cyanosis or undue bleeding, and the recovery is rapid and complete. You do not get the muscular relaxation from ethyl chloride you do from ether, but there are many operations of short duration, five to ten minutes, where it can be employed successfully. On one occasion I kept a patient anesthetized with this agent seventeen minutes, with rapid recovery and no untoward effects during or following the anesthetic. The inhaler that has given me the best results consists of a rubber face piece connected to a right angled piece of metal tubing to which is attached a rubber bag. An opening at the angle of the tubing permits the spraying of the ethyl chloride directly into the bag. The air is controlled by closing this opening with finger or thumb. The spray of ethyl chloride is the best form to use. Ethyl chloride presents several advantages over nitrous oxide and other short term anesthetics, not the least of which is the portability of the inhaler and the anesthetic agent, all of which can easily be carried in a coat pocket. The simplicity of its use, coupled with its safety and the fact that it is adaptable to certain operations of short duration makes ethyl chloride a valuable member of the anesthetic family.

To sum up: The anesthetic risk can be lessened by the proper selection of the anesthetic suitable to the individual case; the anesthetic should be given by an experienced administrator; morphine and atropine are indicated and should be used except when there exists some positive reason for withholding them; the use of a short term anesthetic as a preliminary to ether; the use of ethyl chloride to the exclusion of other anesthetic agents in selected cases where it is suitable.

ACIDOSIS

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The term acidosis was originally applied to the abnormal metabolic state in which there is an excess of acetone, diacetic acid and beta-oxybutyric acid in the blood whose normal carbon dioxide carrying capacity is thus interfered with. Since then other acid bodies have been found in the blood in abnormal states and the term now usually includes all those abnormal states in which there is an unusual production of acids or in which there is an excessive retention of acid bodies in the blood. The condition in which carbon dioxide, the anhydride of carbonic acid, accumulates in the blood in cases of cardiac and respiratory failure is usually not included in the term acidosis. A more accurate definition of acidosis is the bodily state in which the capacity of the plasma for carrying carbon dioxide is reduced below 50 volumes percent. While it is customary to speak of acid bodies in the blood yet as such they do not exist. The blood in life is always alkaline and as rapidly as acids are produced by normal and abnormal metabolism they are neutralized by the alkalis of the blood and excreted by the kidneys. Death usually occurs before the hydrogen ion concentration of the blood reaches neutrality or pH7. Acids administered to dogs experimentally cause very rapid death when the pH reaches 6.9. Diminished alkalinity describes the condition more accurately so far as the chemistry and physics of the condition is concerned, but it is not so expressive of what is occurring as the term acidosis.

While acidosis is usually thought of as a condition of the blood and more particularly of the plasma, yet as all the tissues of the body are bathed and saturated by the plasma the condition of acidosis is found throughout the body generally. It is probably more accurate to say that the acids of catabolism are formed in the tissues and are carried away by the plasma.

Among the laity and among not a few physicians the condition of acidosis is referred to as a pathologic entity and to state that a patient is suffering from acidosis serves as a satisfying

diagnosis. Acidosis, however, is only a symptom of certain clinical entities. Often it is the most important symptom and one to be combated vigorously. It never constitutes a diagnosis by itself any more than hyperpyrexia can be termed a diagnosis.

The substances concerned in maintaining alkaline blood are sodium bicarbonate, NaHCO_3 ; disodium hydrogen phosphate, Na_2HPO_4 ; and proteins. By far the most important of these is sodium bicarbonate. In normal metabolism carbon dioxide is the most common acid produced. It is loosely held in solution by the alkaline blood and as the latter passes the pulmonary capillaries carbon dioxide escapes into the alveolar air. When other acids are present, and they always happen to be stronger than carbon dioxide, they unite with the plasma bicarbonate and so interfere with the carbon dioxide carrying ability of the plasma. Carbon dioxide consequently accumulates in the tissues and as one result of this the respiratory center of the medulla is stimulated and forced respirations occur. The attempt on the part of the organism is to get rid, as rapidly as possible, of the little carbon dioxide that can be carried by the plasma by means of increased pulmonary ventilation. By this process more air passes in and out of the lungs and that coming out contains less carbon dioxide than in the case of normal breathing and metabolism.

The increased respiratory effort, or hyperpnea, just referred to constitutes the one characteristic clinical sign of acidosis and that is present only when the condition is fairly well advanced. "The only symptom that may be considered positively pathognomonic of acidosis is hyperpnea or deep breathing, the so-called 'air hunger' of Kussmaul, the cause of which has already been explained. The breathing of acidosis is deep, it is not usually increased in rate, and differs markedly from the shallow, rapid breathing of pneumonia or the labored breathing of obstruction. It is pauseless and though the several inspirations may vary in depth so that a modified Cheyne-Stokes respiration may be present, in general the excursions of the abdomen and thorax are nearly the same with succeeding respirations. The most striking is the amplitude of the respirations and the distinct effort with which they are accomplished. They are heaving, the chest rises and falls with each respiration and often the accessory muscles of respirations are brought into play." As the blood is well aerated and the hemoglobin intact, "There is no cyanosis except in the presence of cardio-respiratory disease. A cherry-red color of the lips is occasionally observed but is of little diagnostic value. Drowsiness may be seen as an accompaniment of acidosis due to acetone

bodies. Vomiting is not a symptom of acidosis." (Howland and Marriott, 1918.)

The acids concerned in the production of acidosis and the conditions in which they are found are as follows:

1. Acids of the acetone group, $\text{CH}_3\text{-CHOH-CH}_2\text{-COOH}$, beta-oxybutyric acid, $\text{CH}_3\text{-CO-CH}_2\text{-COOH}$, diacetic acid. $\text{CH}_3\text{-CO-CH}_3$ is the formula of acetone. Each of these may be successively formed from the preceding by oxidation. There is much evidence to show that beta-oxybutyric acid may be formed from diacetic by the reverse process of reduction. It is universally conceded that the two acids are results of fat and fatty acid catabolism (Wells, p. 550) and perhaps of protein catabolism. They are formed when the ability of the body to handle carbohydrates breaks down as in diabetes or when no carbohydrates are present as in cases of starvation, etc. They are frequently found after anesthesia, perhaps as result of the coincident restriction of diet as much as to the specific effect of the anesthetic. Acetone acidosis is also found in the toxemias of pregnancy, in infantile marasmus, in cyclic vomiting (even aside from the lack of food caused by the vomiting), in Asiatic cholera (Sellards and Shaklee), in inanition and cachexia. It is particularly common in children, disorders in them resulting in acidosis which would not cause it in adults. More common than acidosis in children is acetonuria and acetonemia without accompanying acidosis.

2. Lactic Acid. This is one of the normal products of catabolism. It is found to excess in severe muscular work, in convulsions, in acute destruction of the liver as in phosphorus and chloroform poisoning, and in severe diarrhea in infancy (Marriott, 1920). Lactic acid is one of the products found in methyl alcohol poisoning and along with formic acid made at same time constitutes an important form of acidosis (Harrop and Benedict). Lactic acid is also found in excess in the toxemias of pregnancy (Wells, p. 559).

3. Formic Acid. Probably the most important condition in which formic acid occurs in excess in the body is in methyl alcohol poisoning. Its relation to methyl alcohol is seen by a comparison of the formulas of the two, methyl alcohol, CH_3OH , plus O_2 yields formic acid, HCOOH and water H_2O . Along with the lactic already referred to the acidosis caused by it constitutes an important symptom of wood alcohol poisoning and one to be combated by alkali therapy (Harrop and Benedict).

4. Acid Sodium Phosphate, H_2NaPO_4 . This acid salt is normally excreted by the kidneys and is one of the chief factors in rendering the urine acid. One of the normal renal functions is excretion from the alkaline blood of this acid salt. In nephritis this function is impaired. In severe

nephritis, acute or chronic, acidosis of sufficient degree to cause death may result (Chase and Myers).

5. Unknown organic acids such as have been found in lobar pneumonia (Lewis and Barcroft, Palmer).

6. It is possible that ingestion of large quantities of mineral acids such as hydrochloric or sulphuric or of acid salts, or of certain organic acids may yield an acidosis similar to that brought about in experimental animals by intravenous or enteric administration of such substances. Such cases of acidosis in man must be comparatively rare and unimportant from a practical standpoint. Most of the organic acids and their salts after entering the body become oxydized to carbonates and as such increase the alkalinity of the blood.

The methods of diagnosing acidosis aside from the symptom of hyperpnea are essentially laboratory procedures. Two of them are sufficiently simple to be termed clinical or bedside methods, but the others require considerable apparatus and skill.

CLINICAL METHODS:

1. Estimation of the carbon dioxide tension of the alveolar air. As the amount of carbon dioxide in the lungs is proportional to that carried by the blood the determination of the amount in the lungs or alveolar air is a good index of the state of acidosis. Several methods for doing this have been devised. Probably the simplest and one clinically satisfactory is Marriott's colorimetric method by bubbling air exhaled into a rubber bag through a standard colored solution and noting change of color due to CO_2 (Marriott, 1916). (Instrument obtainable from Hynson, Westcott & Dunning, Baltimore.) Other methods of more complexity are those of Fredericia and of Haldane. In health the carbon dioxide tension of the alveolar air is 45 to 40 mm.; 35 to 30 mm. represent mild acidosis, 20 mm. indicates a dangerous degree of acidosis; in coma due to acidosis it may be reduced to 10 mm.

Closely allied to this method of determination of the alveolar air carbon dioxide is the one recently described for determining the amount of acetone in the expired air (Higgins). It should be noted, however, that there may be marked acetonemia and acetonuria without a corresponding acidosis.

2. Sellards' alkali tolerance test. In normal adults the ingestion of 5 to 10 grams of sodium bicarbonate is sufficient to render the urine alkaline. In cases of acidosis 4 to 10 times this amount may be required. This test is very easily applied and in addition to being a test of acidosis it is an excellent therapeutic measure (Sellards, 1912).

Methods by examination of urine: These all depend upon a normally acting kidney. They are comparatively easy to make, but show less accurately the true state of acidosis than do examinations of the blood.

1. Detection of acetone bodies, acetone, diacetic and beta-oxybutyric acids. Acetone and diacetic acid tests are readily done as a routine on all urines. One of the simplest and cleanest methods of testing for acetone in urine is to add to 5 cc. of urine in a test-tube 1 cc. of a 2 percent solution of sodium nitroprusside in a 1 percent solution of acetic acid. (It is unnecessary to use weights and measures in making this solution or doing the test. The nitroprusside-acetic acid mixture will keep several days.) The urine and nitroprusside mixture is then overlaid with strong ammonia water. A purple ring denotes acetone. Acetone in the urine is only suggestive of acidosis and should be followed up by other tests. Acetonuria without acidosis is of very common occurrence in children. Gerhardt's well known ferric chloride test (Stitt, p. 581) for diacetic acid is simple and good but open to two sources of error. In certain alkaline urines the reaction may appear (Maxwell) while a purplish red color is produced after the ingestion of salicylates, such as the much-used aspirin of today. In case of doubt the urine should be boiled, a procedure which will expel the diacetic acid but not the salicylates, and then tested in the usual manner. The test for beta-oxybutyric acid while not difficult is longer and not adapted to routine examination of urines.

2. Determining the degree of acidity of urine. In normal urines the degree of acidity increases as the specific gravity increases. Multiplying the last two figures of the specific gravity in normal undecomposed urines gives approximately the number of cubic centimeters of normal alkali needed to neutralize 100 c.c. of urine, phenolphthalein indicator. High acidity in urines of low or normal specific gravity is somewhat suggestive of acidosis. A more accurate method of determining acidity is to estimate the hydrogen ion concentration of the urine (Anon. p. 243). One of the defenses of the body against acidosis is the formation of ammonia and the neutralization of the acid by the ammonia. The acids are then excreted in the urine not as such but in combination with ammonia. Consequently systemic acidosis may be marked while the urinary acidosis is essentially normal.

3. Estimation of the amount of ammonia in the urine (Stitt, p. 578). Normally about 0.7 gram of ammonia is excreted by the urine daily. In certain conditions of acidosis the amount of ammonia in the urine may reach a total of 5 to

10 grams per 24 hours. The percent of ammonia to the total N in the urine may be increased from the usual 3 or 5 to 30 or 50 percent. The urinary ammonia is comparatively easily estimated by several well known laboratory procedures, especially by the aeration method (Anon, p. 228). The formation of ammonia in the body in cases of acidosis is of much interest as it represents a special defense against that condition. This special defense is most marked in the acidosis due to diacetic and beta-oxybutyric acids. In other conditions of acidosis ammonia formation is almost negligible, and is essentially lacking in the acidosis of nephritis. The estimation of the ammonia in the urine is usually much simpler than the estimation of the acid bodies and yields more valuable information.

Methods by examination of the blood. Just as in diabetes and nephritis examinations of the blood yield information of more value than the more frequently made examinations of the urine, so in acidosis blood examinations yield more valuable information than urine examinations.

1. By far the most important of these methods and one by which the degree of acidosis may be accurately stated is that in which the carbon dioxide combining power of the plasma is determined by the well known and comparatively easily used Van Slyke apparatus (Van Slyke, Stitt p. 274, Anon p. 264). The test itself is spectacular as one sees the carbon dioxide escaping from the plasma into a graduated tube by the addition of sulphuric acid. It also shows graphically what happens in the body when the carbon dioxide is displaced by acidosis into the tissues. Normally 100 c.c. of plasma will hold 80 to 53 volumes of carbon dioxide. In mild acidosis without symptoms the plasma will hold 53 to 40 volumes, in moderate acidosis with symptoms referable to the acidosis 40 to 30 volumes, and in very severe acidosis 30 volumes and less. The lowest values in fatal cases are about 20.

2. A less accurate and less spectacular method than Van Slyke's but using simpler and less expensive apparatus is Levy, Rowntree and Marriott's device for determining the hydrogen ion concentration of the serum or plasma by a colorimetric method. pH 7.6 to pH 7.8 is normal while in conditions of acidosis figures of pH 7.55 to 7.2 are obtained. pH 7.0 is the point of neutrality. In one of their experiments on dogs by intravenous injections of hydrochloric acid pH 6.9 was obtained, the animal dying about 20 minutes later (Levy Rowntree and Marriott, 1915).

3. A similar method is determining the alkalinity of the plasma by microtitration (Stitt, p. 568).

4. Sellards' serum test. One cubic centimeter of serum is added to 25 c.c. of neutral absolute alcohol, shaken and the whole filtered. A drop of phenolphthalein solution is added and the whole filtrate evaporated to dryness. Normally a reddish purple color develops; in severe acidosis, there is a faint pink color or none at all, but the addition of a drop of water brings out a pink color. In extreme acidosis water fails to bring out the color (Sellards', 1914).

The chemistry of acidosis points the way to treatment. The therapeutic substances employed are dextrose, alkalis, principally sodium bicarbonate, and water.

In acetone-body acidosis when the fats and possibly the proteins are being oxidized to diacetic and beta-oxybutyric acids and the available sugar is apparently gone the administration of dextrose is indicated except in the acidosis of diabetes in which condition the body's ability to handle dextrose is broken down. When the alimentary tract will tolerate it dextrose may be given by mouth in 5 to 10 percent solution about as frequently as liquid nourishment is usually given. If not tolerated by the stomach it may be given by rectum in 5 percent solution in bulk or by the drip method. The most certain method and one often yielding brilliant results is by intravenous injection of a 10 percent solution, 50 c.c. for a very small infant, 500 or even more for an adult. The dextrose solution should be filtered and autoclaved. It should be administered slowly so as not to place a sudden strain on the circulatory apparatus.

In acidosis from any cause alkalis are indicated, but in the acidosis of diabetes the results are not satisfactory. Sodium bicarbonate may be given by mouth in doses of 1 to 4 grams at a time. It may be given rectally as in the case of dextrose. Intravenously it often gives brilliant results in cases of extreme acidosis. For intravenous use a 4 percent solution is employed, 50 to 100 c.c. for infants, 200 to 300 c.c. for larger children and 500 c.c. for adults. It should be prepared by adding the dry sodium bicarbonate weighed out on sterile scale pans, handled with a sterile spatula, and adding it to freshly distilled and sterilized water. After once prepared it cannot be sterilized as in heating one molecule of carbon dioxide is liberated and the irritating more alkaline sodium carbonate results. Dry sodium bicarbonate is essentially sterile. Its solution does not keep, but breaks down spontaneously into the carbonate. It may be combined with the dextrose solution and the two substances given together. Acidosis is of such common occurrence among children that it is often well in treating acutely ill children to anticipate acidosis and administer sodium bicarbonate or the more palatable sodium citrate.

which finally appears in the blood as sodium bicarbonate, as a prophylactic measure. When the urine has become alkaline or has an acidity so low that 100 c.c. may be neutralized by about 10 c.c. of normal alkali, the alkali therapy should be lessened or discontinued.

In acidosis associated with diarrheas and vomiting the body usually becomes rapidly dehydrated and the kidneys unable to excrete properly, water is urgently needed. It should be given liberally by mouth if possible. If not it may be given rectally in the form of salt solution. In urgent cases salt solution may be given intravenously in about the same quantities as for the dextrose and alkali solutions already mentioned. In infants up to 300 c.c. may be given intraperitoneally by means of a short-beveled needle inserted in the midline below the umbilicus or just outside the rectus muscle at the level of the umbilicus in the left side to avoid puncture of the liver. The buffered solution of Ringer (sodium chloride, 0.7 percent, potassium chloride 0.03 percent, calcium chloride 0.025 percent), is better than the usual salt solution (Howland and Marriott, 1918; Marriott, 1920).

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"THE PHYSICIAN"

RELATION OF THE PROFESSION TO SOME
DISEASE HABITS*

BY

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That we are creatures of habit is a most trite but true saying. The lower animals are governed by it even more than we. The small brained swine respond with regularity to the feeding hour, more from habit than hunger. The horse soon learns to turn at the end of the corn-row, without even being directed.

All habits are physiological in the manner of their production and development. In the main there occur the afferent impulses awakening central nervous reactions and giving rise to efferent impulses which bring about peripheral reaction of gland, muscle or tissue. Closely related parts and centers are affected, but to a lesser degree. The physiological fact to remember is that there are certain paths of conduction and definite centers of response which become more or less permanently changed from the traveling or impact of these impulses. Of all points of contact and stress that which probably suffers most is the nervous center. Here then is where we must look for the chief lesion arising in habit formation. The processes of induction may vary, but the method of physiological development will be the same whether it be the liquor habit, the opium habit, postural habit or the habit of constipation. If we keep constantly in mind the truth, proved by reasoning and clinical observation even if not readily demonstrable in the laboratory, that the chief point of injury in habit formation is the nerve center, we can realize more easily why habits are difficult to eradicate; and if we would pursue the wiser course, how very important that the profession, collectively and individually, should take every means possible to prevent habit formation.

When mention is made of habit formation in relation to medical practice thought almost invariably centers upon chronic alcoholism or drug addiction. One purpose of this discussion is to show that the subject has a vastly wider application.

A few years ago when alcohol was king of the habit-forming realm, its victims were found by scores in the larger public institutions. Although, as practitioners, we may chafe under the curtailment of our rights and liberties in the matter of prescribing, the convincing fact stands out and compels admission of the truth that prohibition has swept from medical sufferers a great host who came in the wake of

*Sixteenth of the series of articles by Dr. Wynn appearing regularly in THE JOURNAL.

alcoholic abuse. Now their number is almost negligible and the subject scarcely requires mention in this essay.

In a similar manner, opium and its derivatives under the restrictive influence of the Federal law, have shown a wholesome tendency to conservatism in their administration by the profession. And most fortunate for the chronic sufferers themselves, the purchase of habit-forming drugs by the patient upon his own initiative has been made almost impossible. Quack remedies which formerly contributed largely to the ranks of opium habits are now put under ban. The outcome of this evolution in wiser opium administration is that whoever now acquires the opium habit does so chiefly through thoughtless administration by practitioners who give these remedies over too prolonged a period or for conditions which might be treated even better by other remedies and measures.

The development of the opium habit is so insidious in its onset and fearful in its consequences, that every practitioner should early in his career lay close to his heart the grave moral obligation placed upon him in this matter. Toward no one is this more necessary than the physician himself. The stress of his life, its irregularities, his acute mentality and conscientious responsiveness to the physical and mental troubles of others, make a heavy drain upon his nervous reserve. Therefore he becomes good soil for the development of functional nervous trouble with its attendant irritability and insomnia. The soothing anodyne or the sleep-giving hypnotic tides the overworked physician through an ordeal; and then comes another and another trial of strength and endurance calling for temporary support. Before he realizes, he is depending upon these unstable props to hold up his nervous equilibrium. For him, most of all, they are not a safe foundation. They crumble and leave his professional career a wreck. Who cannot name among his professional acquaintances a number of such—generally young men of brightest promise. The records of sanatoria and large hospitals show many of these pathetic figures who arouse one's deepest sympathy. Not rarely the picture is made still more touching by the wife who has also been drawn into the vicious habit stream. These uncanny facts are offered not so much in criticism as in exhortation that in the case of our own families we should avoid the use of opium or powerful hypnotics. Where the indications for these remedies exist, put the responsibility of their administration upon a brother practitioner.

The position here set forth is not to be construed as raising any question concerning the extreme value of the opium group of remedies,

when wisely prescribed. The service of morphia to surgery is invaluable. In medicine its soothing effect upon pain, its quieting influence on mental apprehension, cardiac distress, and respiratory agitation are but a few of the emergencies in which it offers not merely comfort, but may constitute an important step in curative therapy. Like fire it is a good thing when properly used, but when carelessly employed becomes a consuming conflagration.

In the giving of opium or its derivatives to any patient, every practitioner should at least have very definite rules of caution from which deviation should seldom be made. Prolonged and continuous administration is not to be permitted except for incurable conditions, or in the aged where habit formation is not so readily developed; and even if formed does not hamper materially the physical well-being or social status. Careful account should always be taken of the temperamental peculiarities of the individual. To those of neurotic type it should always be given with the extremest caution. Its use in recurrent outbreaks of hysteria and migraine is unjustifiably bad practice. Other methods may prove less brilliant in the relief of the patient but they will save the doctor's conscience and protect the patient's future. In no phase of medical practice has the profession been more derelict in this particular than in the treatment of dysmenorrhea. The safe and wise procedure in any case where morphia is indicated is to employ the hypodermatic method—either by the physician himself or under competent nurse control. In this manner the quantity and frequency may be safely regulated and withdrawal instituted early enough to insure the patient's best interest.

Almost equal to opium abuse in recent years has been the indiscriminate use of cocaine—notably in the form of sprays to the upper respiratory tract. It too, has developed a tragic group of victims. Although not so hopeless in prognostic outlook as the morphia habit, cure can only be hoped for through prolonged institutional restriction. Not a few of these cases represent the vain attempt to escape from chronic opium narcotism only to find themselves haunted by two demons instead of one.

In sequence from the foregoing are to be mentioned chloral, the milder hypnotics, chloroform and the analgesics. All have their risks in the matter of habit formation and therefore a corresponding obligation upon the physician to observe caution in their repeated administration. Concerning all of them it may be said with truth, that in the beginning they were heralded by enthusiasts, and especially the pharmaceutical houses, as *not* habit-forming drugs. Wider experience by thoughtful and conservative observers invariably proves the contrary.

In the light of these well established facts let the physician in prescribing habit-forming drugs govern his conduct with the utmost wisdom and foresight.

In considering the tobacco habit I wish in the outset to make clear that I do not belong to that group of "reformers" who feel that, having placed alcohol under universal ban, they should now march upon tobacco. Certainly no one can claim, however, that the latter is a food. Nor can argument be massed to prove to the hygienist that waiting rooms, banquet halls or compartments for men laden with tobacco smoke are wholesome. To the aesthetic minded, who dare contend that radiators, hotel lobbies, and railway coaches are made beautiful by tobacco bespatterment? And to a refined olfactory sense which delights in the perfume of roses or the aroma of spruce forests, is there any divine suggestion in the fetor of a tobacco breath—most of all the nauseating, sweetish odor of the cigarette fiend?

In spite of these criticisms I am compelled to admit that with the vast majority of men, who are users of tobacco *in moderation*, it is a mental solace and comfort. Oftentimes to the chronic insane it is a real boon. What institution worker has not seen the restless and unmanageable back-ward patient made calm and content by tobacco? Many are the husbands, grouchy and irritable from the day's annoyances, who are calmed or sweetened into companionability at the fireside by a pipe or cigar. And who that uses it moderately will not bear testimony to its helpfulness in mental pursuits? How often one observes the thinker, writer, student, or dreamer about to tackle some difficult problem first light his pipe or cigar and then proceed with greater confidence in the accomplishment of the task. What is there about smoking that coordinates and gives momentum to mental processes? It is not the technique of the act. Rather it is a state of mind induced by the mild tobacco toxemia, which shuts out the irritating and irrelevant winds which ruffle and divert the currents of thought. It is near akin to the state of mind into which we lapse with the first approach of sleep at night; or early in the morning when half-waking—times when we frequently find the solution of our problems with startling amazement. In similar manner the smoker sails into a harbor of quiet and safety where he feels confident of himself, and gives expression unhampered to the best there is in him.

Lastly what an unfailing touchstone is tobacco of good-fellowship. It introduces, democratizes, softens old asperities, warms the cockles of the heart and promotes universal brotherhood.

But let not this encomium of the weed deter us from attack of the real and serious harm which may result from tobacco abuse. Every insurance company recognizes the injurious effect of tobacco toxemia upon blood pressure and cardiac rhythm, through nerve-center impairment. Recent fashions in smoking are rendering more acute and widespread the evils of tobacco abuse. First of all the World-war has enormously increased the habit of cigarette smoking. That it is more frequently followed by harmful results than other forms of tobacco consumption, is for two reasons—first the tendency to more continuous indulgence; and secondly the prevalent habit of inhaling the smoke deep into the lungs and exhaling it through the nostrils. Carried to excess this sets up a diffuse catarrh of the whole respiratory tract. It is the "smoker's sore throat" which we used to see, projected upwards and downwards more or less over the whole respiratory tract. The protective, ciliated epithelium becomes damaged, making the whole respiratory system more vulnerable to infection by inhalation. From the structural changes of katabolism there is undoubtedly a great deal of protein, autogenous toxemia. This is the most rational explanation of the sallow complexion so frequently observed in those given to excessive consumption of cigarettes.

But the most disastrous inroads of cigarette abuse are to be found in the central nervous system. Out of his sex-egoism and false conception of manliness, the mind of the youth turns naturally to the cigarette for experimentation and exploitation—justifying himself in part by the fact that the individual cigarette contains but a small amount of tobacco. His growing and impressionable nerve centers react powerfully to the toxemia and soon come to demand its sustaining and soporific influence. Not only is there soon acquired the tobacco habit, but curiously there arises in not a few cases loss of inhibitory, moral control. Among high school students I have observed not rarely in those who are cigarette smokers a loss of mental acuteness but more conspicuous still a weakening of moral stamina—the evil fruitage of tobacco excess. Hand in hand with this failure is apt to arise an overweening sex egoism, often with shocking tendency to sexual eruvicism and degeneracy. Not a few lads have I known of ideal heredity, with every advantage of home training and education, well endowed, who have started down the immoral toboggan with cigarette smoking.

Follow an individual of this type, or the older, hardened "cigarette fiend" through a grave, acute or chronic infection. Note the saffron-tinted fingers, the tremorous hand, the nauseous, sweetish odor which permeates the room, and

the imperative and constant demand of such a patient for more cigarettes, and deny if you dare the heightened gravity of prognosis—made so by his habit. Is it not incumbent upon the profession at this time to more frequently call attention to the ominous significance of these things?

Very recently cigarette smoking has developed a new phase of great seriousness in my judgment. More as a matter of fashion than as part of woman's enlarged liberty of rights and conduct, smoking is becoming quite the thing among the "smart set". And now like other fashions it is insidiously but surely extending to all social classes. Upon three different occasions within recent months I have seen neatly dressed girls in their teens, seated in public places with their parents, brothers, sisters and sweethearts, smoking cigarettes. Is the fashion to become universal without the profession of medicine raising a finger to point out the dangers? The generally recognized emotional instability of the female sex indicates a type of nervous constitution in which chronic cigarette toxemia is more likely to act with disastrous results than in men. Young women, therefore, who acquire the habit are likely to manifest even more frequently than men, loss of intellectual acuteness, a weakening of moral sense, and impaired general nutrition. Loss in beauty will necessarily accompany the impaired physical, mental and moral tonus.

Were I asked the most common habit of our modern civilization, I should answer without hesitancy, chronic constipation. The "American Army of Constipation" is made up almost entirely of women. It is one of the physical vices begotten of wealth, luxury, ease and physical indolence. Our pioneer mothers were not so generally afflicted. The habit is less common among European than American women, because more of them perform manual labor which calls into action the general muscular system—notably the muscles of the abdomen. Women of the English middle classes engage quite generally in open-air recreation which combats the tendency to chronic constipation. Americans are more prone to the condition because of social habits and customs. Coarse foodstuffs which offer bulk for the bowel to labor with are tabooed in good society as vulgar and common. Instead knick-knacks and delicacies which pamper the appetite and weaken intestinal effort are cultivated. The bowel muscle like other unused musculature becomes soft. Thus insufficient or improper food residue within the lower bowel, indolent habits of body or improper exercise, and failure to observe the habit of regularity in responding to bowel stimuli, result in constipation. Recourse is had to artificial measures

acting directly or indirectly upon the defecation center. A purge, a saline, a laxative is called upon to do what proper physiological management, from day to day, should have accomplished. More and more the individual comes to depend upon artificial help. Although primarily a hygienic and dietetic abuse, it becomes ultimately and chiefly a cord change. The defecation reflex takes on a plan of action which calls regularly for its stimulus. A horse trained to go by the whip will not hasten his lazy pace until goaded. So the cord center in chronic constipation comes to demand its accustomed stimulus before getting into action.

Contributing very largely to the almost universal habit of constipation amongst women are the quacks and mercenary minded of the profession—appealing to the public through "cascarens", "Aloettes", "Nature Remedies" and the like. Nor should we in this connection fail to acknowledge our own responsibility. Too often we yield to the layman's demand for a remedy pursuing the easier if the lazier course of prescribing cascara, an aloin compound or other laxative. The larger duty in such cases is to lay down with emphasis the physiological law, of proper exercise and diet. It is for us to inculcate publicly and privately, that instead of chiropractic titillation of the spinal nerves, osteopathic pummeling of the abdominal muscles and bowel, or the repeated use of laxatives, real, fundamental and lasting progress is made toward a healthful bowel condition, by living the physical, hygienic and dietetic life which will make these measures unnecessary. Is this not a phase of public health in which large responsibility is placed upon the profession? Are we seizing the opportunity and discharging the duty—publicly as well as privately?

Does it not lie within our power to arouse in the feminine world a larger interest in open-air activities—tennis and golf for those who can afford it; hiking and nature study for a large number; floral and vegetable gardening for those who have the facilities—and there are many such; rowing, riding, swimming, athletics, etc.; and last but most important of all, actual participation in the science, art and labor of domestic life. The false conception of modern social life that a "lady" should not work with her hands is pernicious in principle—harmful alike to health and happiness. It would be well for every woman of the day to read Gene Stratton Porter's novel, "Her Father's Daughter," for its wholesome suggestiveness to mind, soul and body. Work, mental and physical, should enter into the program of every life. Not only does it give the satisfying consciousness of duty performed; it yields a return in a more healthful body functioning without artificial aid.

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Devoted to the Interests of the Medical Profession of Indiana

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EDITORIALS

REMOVAL OF TONSILS AND TEETH FOR CURE OF RHEUMATISM

Statistics show that there has been a very marked decline in the mortality from acute rheumatism during the last ten years. In a statement concerning this matter, the Metropolitan Life Insurance Company quotes a leading clinician to the effect that the chief causative factor of acute rheumatism is a focus of infection within the body and usually within the head, chiefly within the mouth and throat, and the reduction in the death rate in acute rheumatism is due to the removal of these foci. The tonsils are the chief sites of infection within the head which are accessible for easy removal. Incidentally it may be stated that the number of damaged hearts is lessening as a direct result of the removal of such foci of infection as diseased tonsils and teeth.

However, it is a question if this intensive attention to mouth hygiene and the attempt to remove all foci of infection by extracting teeth and removing tonsils is not going to the extreme. There can be no question of doubt about the part played by foci of infection in any part of the body in producing rheumatism and cardiovascular as well as renal disturbances, but just at the present time it seems the fad, for those physicians who are rather superficial in their study of cases, to pounce upon tonsils or teeth as a causative factor in a large number of diseased conditions that may be due to some foci of infection in other portions of the body. Many inoffensive tonsils and comparatively sound teeth have been sacrificed in consequence of carrying a very valuable and justifiable procedure to extremes. Perhaps dentists have been most at fault, though for the most part they have been encouraged by the members of the medical profession who have insisted that foci of infection about the roots of teeth, with their possibilities of great harm, should be removed, and no doubt this has led many dentists to over-estimate the danger connected with unsound teeth that rational judgment would commend to treatment. The loss of teeth is a serious thing to the average individual, and the recommendation to sacrifice

teeth should be given only after a most thorough and analytical examination, not omitting an x-ray examination by a skilled and experienced roentgenologist. The sacrifice of tonsils, when the operation has been done skillfully, is not such a serious matter, even when inoffensive tonsils have been removed, but here again the recommendation to have tonsils removed should be based upon findings which justify operative procedures. A tonsil which some clinicians have termed "juicy" and from which mucopurulent secretion may be expressed, is potentially a source of trouble, *no matter what its size*. On the other hand, tonsils which may be termed "enlarged" but which are and have been free from inflammation, and from which no infective material can be expressed, may be considered reasonably healthy and in no sense a focus of infection.

In an examination of the tonsils mere inspection does not suffice, but the organ should be drawn from its bed by fixation forceps for the purpose of noting its freedom, and it should be squeezed for the purpose of determining whether it contains infective material. Having decided that the tonsils are infected and should be removed, the operation should be done in a skillful manner by one who has had training and experience in that particular work. Bad tonsil surgery is putting the procedure into as much ill repute as bad judgment in deciding when the tonsils should be removed. The whole subject is one for the careful consideration of clinicians, and if we are going to keep it on a rational basis we must use that intelligence which is due every scientific problem if it is to be handled in a sane manner. The lowering of the morbidity statistics as a direct result of removing foci of infection from the body which, in a large portion of cases means ablation of tonsils and improvement of the hygiene of the oral cavity, is deserving of credit to the medical profession, but we ought to be guarded in our endeavors in this direction if we are to prevent our procedures from getting into disrepute through our failure to consider the case from a rational standpoint.

DR. HUGH CABOT'S SOCIALISTIC SCHEMES

DR. CABOT'S REPLY AND OUR ANSWER

In the last or October number of THE JOURNAL we printed an editorial entitled "Dr. Hugh Cabot's Medical Socialistic Schemes for Michigan", with allegations and comments which we believed based upon suitable foundation. To this editorial Dr. Cabot has taken exception, and his reply to the editorial, together with our answer to the reply, are herewith reproduced and are self-explanatory.

November 7, 1921.

November 10, 1921.

EDITOR OF THE JOURNAL OF THE

INDIANA STATE MEDICAL ASSOCIATION,

406 West Berry St., Fort Wayne, Indiana.

My Dear Sir:

Your editorial in the number of October 15th has been brought to my attention. Your reading of a newspaper quotation in which I am alleged to have said certain things is so diametrically opposed to the facts that I make haste to write you on the matter. You have apparently concluded from the newspaper paragraph which I do not recognize, that I am at some time supposed to have advised the admission to the University Hospital of patients who could afford to pay. Now this is precisely the reverse of the position which I have always taken and now take in the matter. The only alteration which has been made in the admission of patients to the University Hospital since my coming here two years ago has been the ruling that patients who can afford to pay a fee shall always be required to do so. I am quite of your opinion that it is improper to use the money of the State for gratuitous service to people not entitled to it and this opinion I have long held and expect to continue to hold. If the University Hospital were to admit patients who could afford to pay, I should be wholly of your opinion. As it does not and as every precaution is taken to avoid this form of pauperism, it appears to me that the criticisms you level at me are not well taken.

My opinions in regard to State Medicine to which you also refer are quite the reverse of those with which you credit me. I have always been opposed to it and my published statements on the subject might readily be obtained. I would refer you to my paper entitled "Compulsory Health Insurance, State Medicine or What?" delivered at the Annual Discourse before the Massachusetts Medical Society, June 9, 1920, at the end of my first year as Professor of Surgery at Michigan. I enclose a copy of the paper in order that you may see that I was at that time violently opposed to State Medicine. I would also refer you to my address at the opening of the Medical School this year which may be found in the November number of the *Journal of the Michigan State Medical Society*. From this, you will appreciate that my opinions have not altered in such a way as to become more favorable to State Medicine and I therefore think that in some way you must have been misinformed in regard to this.

I assume that you would not willingly do injustice to a colleague and therefore I assume that your willingness to condemn and censure me on opinions that I have never held and do not expect to hold is due to misunderstanding. I do not know that this is the proper place to refer to your strictures aimed at me concerning "soft berths", but without going into what may be regarded as a personal question, it is perhaps proper to point out that those looking for "soft berths" do not do so by accepting positions that cut their incomes more than in two. I do not make any claim to credit because I have seen fit to reduce my income by a large amount, but I do think that it entitled me to be free from the assumption that I am looking after my own comfort in doing so. Considering the rather severe way which you have written concerning me, I would ask that you give this at least as much publicity as you have given your editorial.

Yours very truly,

HUGH CABOT, Dean.

HUGH CABOT, M.D.,

Medical Department, University of Michigan,

Ann Arbor, Michigan.

My Dear Dr. Cabot:

Your letter of November 7, taking exception to an editorial in the October number of *THE JOURNAL*, has been received and noted.

I have not the slightest intention nor desire to misrepresent or misquote you or anyone else, and I am just as much in favor of those things which make for medical progress as you are. Perusal of numerous newspaper clippings covering some of your speeches, and talks with various Michigan medical men who thought they rightly interpreted your attitude, have led me to believe that you favor various schemes which many of us believe not to be to the best interest of the public or the medical profession at large. From conversations with medical men in other states it would seem that I am not the only one holding such opinion. You may have been misrepresented, and perhaps the unfavorable opinion is based upon a wrong interpretation of what you have said and what you have been doing.

You are now the head of a great medical school that, I do not think you will deny, has been guilty—certainly until very recently—of a very loose method of determining who is entitled to gratuitous services at the hands of its Hospital Staff. While I do not think that the pecuniary phase of the question, so far as it affects medical men not connected with your institution, should be overlooked wholly, yet there are broader considerations which justify me in believing that the practice carried on by your Hospital and its Staff, in the final analysis, is detrimental to the public as well as to the medical profession. Knowing that this practice exists, are medical men not justified in interpreting the statement of the Dean of this institution as indicating that the practice is to continue when you say, as you were reported in the *Detroit Free Press*, and which I notice you do not deny, that "rich and poor should be treated alike"? This statement is reported as having been made by you in connection with a discussion of the subject of admission of patients to the University Hospital.

I had not the pleasure of seeing your paper published in the *Boston Medical and Surgical Journal* until I received a reprint of it from you, and today I have received the November number of *The Journal of the Michigan State Medical Society*, containing your address delivered at the very recent opening of your Medical School. In the latter you acknowledge that there has been misapprehension in the minds of the physicians concerning the attitude of the faculty of your institution, and this necessarily must indicate that there has been occasion for much misapprehension.

Neither you nor any member of the faculty can justly deny that the Medical Department of the University of Michigan has done more to pauperize the community by granting gratuitous medical and surgical treatment to the well-to-do than any one institution or factor in the Middle West. In fact the action has been so flagrant that it has been a common remark among Michigan doctors, as well as doctors in some contiguous states, that it is exceedingly difficult to secure even a very ordinary fee from many well-to-do people for the reason that those people claim that they can go to Ann Arbor and have their work done for nothing, with the hospital charges as their only expense. Furthermore, such practice on the part of your University helps to make it impossible to secure decent remuneration from

the rich industrial organizations or insurance companies for any medical or surgical services rendered, and I do not think that anyone will admit that those organizations should be an object of charity at the hands of the medical profession or even the State.

So far as I know, not a single person has objected to the admission of well-to-do or very wealthy patients to the University Hospital or the Medical School clinics, providing they pay respectable fees for the services, but objection is raised to giving these patients *gratuitous* services, or services at a very nominal fee. The practice followed by your institution is wrong in principle, and in the end is bound to end disastrously. In the discussion of this matter we may overlook the unfair competition of the University, with its injurious effects upon the private practitioner.

Primarily, your University Hospital was established as a teaching hospital, and as such it not only fills a great need but has received a sufficient number of patients for teaching purposes and has furnished skilled gratuitous services to many deserving poor. If for any reason you fear that there will be a dearth of material it seems to me that it would be possible to secure all the cases necessary, and even more than your institution can care for, by appealing directly to the medical men of Michigan to send you one or two cases each throughout the year as you already have suggested in an indirect way. It should be understood that these cases come from the deserving poor, and if others are referred to the University Hospital such cases will be required to pay fees consistent with ability to pay.

Now that you say so, over your own signature, I am willing to believe that you are opposed to the very practices that have made the Michigan University the subject of bitter criticism, and it is unfortunate that you, in your choice of words, have had your real attitude misinterpreted. Knowing what the Hospital of the University of Michigan has been doing, and then have you openly say that "rich and poor should be treated alike" when they enter the University Hospital, makes it appear that you are sanctioning a continuance of the policy that heretofore has existed. It appears that what you wanted to say is that so far as being admitted to the Hospital is concerned, anyone can be admitted, but all are *not* treated alike so far as paying for the services is concerned. If the Hospital of your institution now is charging well-to-do patients fees consistent with their financial circumstances, which seems to be a recent innovation, then that fact should be made known to the medical profession to the end that the justifiable criticism formerly aimed at the Hospital shall cease and deserved cooperation be given you and your confreres on the Staff.

Concerning my reference to the "soft berth" perhaps that is taken in a manner not intended. I knew that you gave up a private practice that netted you more money than you will get out of your present position, though I think you will agree that being the head of a great University, with a fixed salary that enables one to live more than comfortably, is in the minds of many sufficient to counter-balance any loss sustained in giving up private practice. But what about the poor though competent doctor who doesn't have such a position and has his income from private practice unnecessarily and unfairly reduced in consequence of the competition of the University which brings about this discussion?

The term "State Medicine" has been applied rather loosely, but I think it generally is conceded now that by State Medicine is meant providing medical and surgical attention by the State to all who desire

it, and this in the end means wiping out private practice wholly, or at least to a very large extent. Your scheme for furnishing "community medical and surgical service" by the members of the Staff of your institution and a selected few outsiders, if I understand it correctly, is a step in the direction of State Medicine in that it paves the way for the operation of a more comprehensive plan directly under the control of the State. Aside from this it starts out by creating a sort of caste in the medical profession, known to the public as such, which is bound to create dissensions and produce vicious results.

I am in favor of everything which tends to improve public health conditions and ameliorate the sufferings of the sick and disabled, but I am opposed to all practices, under whatever guise, that tend to pauperize the community, to stifle individual initiative in medical practice, and unjustly trample upon the rights and privileges of individual members of the medical profession. Hospitals, whether federal, state or municipal, should be open to people, irrespective of social position, but the medical and surgical services should be gratuitous only to the worthy poor, and charged for to all others consistent with their ability to pay. The record of your University Hospital, and your statements which you now say have been misconstrued, are not in keeping with the plan mentioned, and that is the reason for the criticism to which you take exception. The medical men of Michigan have certain inalienable rights, and one of them is the right to practice medicine without the unfair and unjust interference with their efforts to earn an honest livelihood. The University of Michigan has trampled upon this latter mentioned right in not only a ruthless manner but in a manner which true economists believe to be detrimental to the public weal.

I believe that I am safe in saying that practically all of the visionary but impractical if not wholly vicious schemes which tend toward the socializing of medicine owe their origin to medical men, erstwhile leaders in the medical profession, rather than to any lay person or lay organization. It is the so-called leaders, like yourself, who start innovations, sometimes with good intentions but more often with selfish ends of one kind or another in view. Not infrequently the innovations are not for the best interests of all concerned and at such times criticism and opposition is justified. I hope the day has arrived when every right thinking doctor in Michigan, through his voice as well as his vote, will register his opposition to the various schemes for socializing medicine, and that will mean offering vigorous protests to some of the plans that some of us believe you have sanctioned and supported.

Concerning this matter of criticizing the sponsors of detrimental innovations as they affect the medical profession, permit me to quote from a letter to me, commenting upon the editorial to which you take exception, as follows: "There is no position in America so high but that its occupant can be criticized for his words and actions. It has become the habit in America to consider the so-called leaders of the medical profession as immune from criticism by their professional brethren—let us change that habit!"

Very truly yours,

ALBERT E. BULSON, JR.

Editor of THE JOURNAL OF THE

INDIANA STATE MEDICAL ASSOCIATION.

P. S.:—In accordance with your request your letter, together with this reply, will be given as much prominence in THE JOURNAL as was given the editorial to which exception is taken.

THE NURSING PROBLEM

A late number of the *Pictorial Review* contains an attack upon the nursing autocracy, by Dr. Charles H. Mayo, in which he offers deserved criticism of the autocratic practice of the majority of the trained nurses in demanding seven to ten dollars a day for services, insisting upon short and regular hours, and in all too frequent instances exhibiting too little of the milk of human kindness in the performance of their duties. He calls attention to the fact that in the vast majority of cases a highly trained nurse is not necessary, and points to the conclusion we already have reached that an advanced standard of preliminary education is unnecessary in order to make a good practical nurse, and that the last two years of a nurse's training is largely superfluous and benefits the hospital most.

While Dr. Mayo very justly contends that there always will be room for the highly trained nurse in specially selected cases, and she always will be in demand by the wealthier classes, yet for the great majority of cases not only is a less highly trained nurse eminently satisfactory but the lower fees of a less highly trained nurse are absolutely necessary for the average run of patients. For people in moderate circumstances, which make up the bulk of our population, the exactions of the modern trained nurse prohibit her employment. As a solution to the problem Dr. Mayo suggests the training of 100,000 girls for sub-nurses. In reality this means accepting girls of ordinary intelligence, not necessarily high school graduates or possessing one or two years of college or university training, and turning them out as practical nurses after a few months' intensive training. It always has been our contention that there is a great field of usefulness for such practical nurses, and that, except in rare instances, the highly trained and specialized nurse, usually unsympathetic and autocratic in her determination to stick to a fixed program as to the kind and quality of work she will do, the number of hours she will work and the pay she is to receive, is superfluous, and a luxury (?) which few can afford and in reality which few care to tolerate except through necessity of having someone to care for the sick.

No doubt Dr. Mayo, who handles the whole subject in an analytical way and offers a solution for the problem, will come in for a good deal of criticism, but nevertheless the discussion of the subject is entirely rational and deserving of thoughtful consideration.

MEDICAL SUPPORT FOR PLAY-
GROUNDS

In these days of industrial depression more than ever there is need for enthusiastic support from the medical profession for the playground

movement in most Indiana cities. In this, as in most questions of preventive medicine, the public is willing to leave the initiative to the doctors, while we as a class are apt to forget the tremendous influence of outdoor exercise upon the future health of our boys and girls because we are "too busy". Credit is due to the few doctors who have found time to interest themselves in behalf of the children along this line, but they are so few in comparison to the number that should obtain as to be almost a negligible factor.

For many years Indiana has boasted of her educational system, but as a matter of fact there is only one city in the whole state that has attacked the school recreation movement in a thoroughly modern fashion, that city being Gary, with its playgrounds of twenty acres or more on each school premise. She not only has the playgrounds, but she puts them to use all day long, in the evenings, on Saturdays, and a part of Sunday. The parents are encouraged to use them in the evenings, either with or without their children, and teachers are trained in organized play in order that the grounds be under competent supervision continuously during operation. For such training in play-supervision teachers are allowed extra salary, with full-time pay throughout the summer. While the Gary school-day is considerably longer than in the average city, yet a two-hour recreation period is made a part of the compulsory curriculum, a feature which of course is entirely unobjectionable to the pupil. The rewards for this intensive training, both physical and mental, have come in the shape of good, robust students who are not only finishing their high school course at fifteen or sixteen but are also sufficiently advanced as to receive credit of from one to two years in any of the standard universities. Contrast these conditions with those that obtain in most Indiana cities wherein a maximum of thirty minutes per day is allowed for recreation on a school yard that usually has the "standing room only" sign out during recess.

When it is recalled that in the recent war over one-fourth of all the recruits examined for the American army were found physically unfit for service, that from six thousand to seven thousand school children of the United States are annually claimed by tuberculosis, and that the average maturity expectancy of the American newly born is only fifty percent, the urgency of the appeal would seem established. The situation is quite analogous to the more or less familiar tadpole experiment wherein the growth of the individual was exactly proportionate to the size of glass receptacle in which he was domiciled.

Joseph Lee expresses the thought that play is natural not only because it originates in orig-

inal nature, but because it conforms at every moment of the child's life to the genetics of his growth and development. It reflects the neuromuscular co-ordinations established at the time and establishes those that are ready to be formed. It reflects also the various instinctive tendencies (or many of them) as they ripen, and helps to ripen and strengthen them. In short it obeys the self-finding and self-developing push within the child. It also respects the limitations of the child as regards these neuromuscular co-ordinations and psychic motives. Play is childhood's heritage, and the one means by which it can attain its full heritage of symmetry, normality and health of body and mind. Real work is the fulfillment of the great play instincts, in fact it is the highest form of play. All pursuits that justify themselves are play, and work is the function of the great team instinct that is the fulfillment by us in our individual capacity, of the law of the social whole.

In one of his campaign speeches, President Harding once spoke as follows: "I regard play as having no small part in the building of citizenship. I am glad to make a campaign speech about play. Competition in play teaches the square deal. I am making no appeal in this campaign that I will not be willing to have tested by the standards that good competitive sport has set up in all ages and among all men. I want only those behind me who are willing to play the game. We have had too much encouragement given to the men who wanted to cut second base or get something for nothing."

The school playground movement then makes not only for good sportsmanship and hence better citizenship, but for broader and saner physical development for the many rather than the specialized intensive training for the few star athletes who comprise the teams of the more strenuous, competitive athletics and whose hearts become sufficiently dilated as to make them easy victims to any severe infection.

Let the members of our profession lend their support and influence toward establishing bigger, better school playgrounds that may work at full-time efficiency for the greater development of the school children of Indiana.

QUALITY NOT QUANTITY WHEN INCREASING THE MEMBERSHIP IN OUR MEDICAL ORGANIZATIONS

We have been wondering if the American College of Surgeons eventually will not drift into the position of taking in most anyone who has sufficient "pull" of one kind or another to get into the organization without possessing the requirements prescribed. It may be difficult to keep all undesirables out of an organization, but there is no need of encouraging laxness in the consideration of credentials. There are some secret orders to which at one time it was an

honor to belong. However, at the present time, when we attend some of the meetings of these secret orders and have not one but several scoundrels walk up and offer the right hand of fellowship and try the "brother" act on us, we are quite undecided as to the value of affiliation with such organizations. A few years ago the American Medical Association sent Dr. J. N. McCormick, of Kentucky, all over this country preaching the doctrine of medical organization and the advisability of admitting practically every licensed physician to the ranks of our regular medical societies. The plea was made that we should take the "off-color" doctors into our medical societies in order to reform them. We took Dr. McCormick at his word and went out into the highways and byways hunting for licensed practitioners to swell the ranks of our local medical societies, and the result has been that we have not reformed the "off-color" members of our profession nor have we improved the character of our medical societies. In reality what we have done is to help establish a dominating crowd in many of our local societies that takes a special delight in voting down any worthy object that comes up for consideration. Whenever a question of ethical importance, or, for that matter, almost any question that has the approval of right thinking doctors, is up for consideration, the "off-color" doctors flock to the meetings in droves for the purpose of defeating it. The rest of the year they are conspicuous by their absence, for a scientific meeting is of no interest to them. The American College of Surgeons started out with high aims, but there seems to be a disposition on the part of many of those who belong to the organization to encourage a combing of the field for members, and it is even hinted that the committee on credentials should be lenient. It is very evident that leniency has been shown in many states if all reports are true and we can judge the qualifications of members by their acts.

For years THE JOURNAL has been preaching "quality, not quantity" as a guide in securing members for our medical societies. We have no faith in the proposition that we ought to take in members in order to reform them. A man who is fundamentally right in the beginning remains so, and whenever he starts out on the wrong foot he generally continues to be on the wrong foot throughout his entire career. He may have spasms of goodness, but he generally reverts to the path that is perfectly natural for him to trod. You "can't get blood out of a turnip," and you can't get righteousness out of a doctor who is naturally, in some manner, unclean or unworthy of the right hand of fellowship of respectable members of the medical profession. A man may be incompe-

tent, but he can correct his deficiencies and he should do so before his qualifications receive the stamp of approval. In our humble judgment medical organizations should scan more closely the credentials of those who apply for membership, and this is especially true as concerns those applicants about whom there is a suspicion as to moral integrity.

VALUE OF RADIUM IN THE TREATMENT OF CANCER

At the recent session of the American College of Surgeons, at Philadelphia, the well-known surgeon, Dr. John B. Deaver declared, in an address before the College, that radium had failed in curing cancer in any stage, and in fact he doubted if radium produced *any* beneficial effect. This edict, coming from a man of the skill and experience of Dr. Deaver, created much surprise and comment, ending in a decision of the College to have the matter thoroughly investigated by a committee that was appointed for the purpose. It is unfortunate that a discussion of the subject appeared in the public press, with considerable criticism of the medical profession for having exaggerated the value of radium. It may be that radium is not proving as valuable in the treatment of cancer as some have believed, and yet it will take more than the conclusion of one man, no matter how eminent, to change the opinion of many serious workers and hundreds of cured patients that radium offers much hope of greatly relieving if not absolutely curing many cases of cancer. However, time and accumulated experience will tell the story, and in enabling us to arrive at dependable conclusions an investigating committee such as contemplated by the action of the College of Surgeons will be approved.

LOWERING THE IDEALS OF THE AMERICAN COLLEGE OF SURGEONS

If the American College of Surgeons stands for anything worth while it will not only purge its membership of undesirables but it will demand of its members a stricter adherence to those principles and objects which not only received the approval of right thinking men when the organization was conceived, but which in reality led the same men to become identified with it. We have heard it stated repeatedly, and from appearances with good foundation, that the iniquitous practice of "fee splitting" still continues in various forms by certain men occupying more or less prominent positions in the College. Our contention is that there should be not even a suspicion of wrongdoing in the fee splitting line among those who have obligated themselves morally to abstain from the practice and to strenuously object to it in others. There certainly should be an effort put

forth to establish the status of any man under suspicion, and if guilt be discovered then punishment should be swift and sure. The College owes it to itself to do this, and no amount of influence should hamper the work or lead to a camouflage of the findings. What pertains to the practice of fee splitting also pertains to the unsurgical and even criminal methods employed by some noted surgeons in making a surgical operation the excuse for the performance of an abortion, or, permit us charitably to say, making an unnecessary abortion secondary to other surgical treatment.

In no field of human endeavor is an active conscience more necessary than in the practice of surgery in any of its various forms, and that applies equally to the application of the science and to the economic or pecuniary phase of the work. The American College of Surgeons started out with high ideals and is destined to perform a wonderful work in improving the status of medicine and surgery as affecting both the medical profession and the public. The College will fail to perform its function if it deviates a hair's breadth from the plans conceived and adopted as a creed. It can well afford—yes, it is even a duty—to have a day of reckoning occasionally, an inventory so to speak, in determining whether laxness is permitted in living up to the tenets of the organization.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

It is time to separate the sheep from the goats in this scheme to socialize the practice of medicine. We should quit paying homage to erstwhile leaders who would destroy the medical profession and all its traditions.

FROM all reports much may be expected from toxin-antitoxin injection in the production of permanent immunity to diphtheria. As has been pointed out by the recommendations of the Indiana State Board of Health, all children entering school for the first time should be immunized at once. Susceptibility to the disease may be determined by the Schick test.

BEFORE now we have stated that the hardest fight before us, as medical men, is the fight against some of the erstwhile leaders in our medical profession if we are to preserve the medical profession and its traditions. The attitude of Johns Hopkins University, and the University of Michigan is ample evidence of our contention. Before long it will be a fight to the finish, if annihilation of private medical practice is to be prevented.

SOME of our advertisers are testing out their advertising by offering to furnish free samples of perfectly trustworthy preparations of their manufacture, and we are wondering how many members of the Association will take advantage of the offers. Incidentally we desire to call attention again to the importance of letting advertisers in *THE JOURNAL* know that you patronize them. It helps the advertisers, it helps us, and, lastly, helps you, for without advertising we could not publish *THE JOURNAL*.

THE Christian Scientists ought to be in great glee, for a California court has decided that "in the state of California prayer is a lawful means of healing disease". This decision was made following a trial of a Christian Scientist for manslaughter in the case of a child dying from diphtheria, with no other treatment than prayer. If this goes on it will not be long before it will be possible to commit most any sort of a crime and go unpunished if the claim is made that the manner of producing death is a method of treatment.

IF public health officers desire to secure endorsement and support for their work from the regular medical profession there will have to be a little change in their attitude concerning the socialistic schemes which various public health officials are supporting at the present time. We are not going to permit the socializing of medicine if we can help it, and the time is ripe for offering opposition to the support which some of our public health officers and other misguided leaders in our medical profession are giving to some socialistic schemes.

THE Roycrofters constantly are soliciting doctors to subscribe for their periodicals, but considering the off-color of the editorial comments pertaining to scientific medicine, which not infrequently appear in the periodicals made notorious by the late Elbert Hubbard, and considering that any and all kinds of advertising—even chiropractic stuff—appears in this periodical.

we hardly see how intelligent and progressive members of the regular medical profession can subscribe for anything put out by The Roycrofters.

ON the twenty-fifth anniversary of *The Laryngoscope* the editor publishes a note of appreciation in which he makes some very pertinent remarks concerning the work of the editor. A long experience in the editorial game prompts us to appreciate the force of one of his paragraphs, and to reproduce it. It is as follows:

The path of editorial conduct and business management of a medical journal is neither smooth nor strewn with roses. Personal differences, editorial jealousies and contentions, medical politics, financial stringencies, contributors' eccentricities, ethical exactitudes and many other handicaps must be met in dignified and decisive manner, and an editorial management that can run this gauntlet successfully must exhibit strength of convictions and faithfulness to ideals.

THE surgeons are losing out. No longer can Crile, the Mayos and our own excellent Indiana surgeons operate goitres without fear of offending the real wise heads in the goitre curing game, for the chiropracs, according to their advertising, claim that they are curing goitre by "adjustments". A lot of women who were invalids and nervous wrecks before submitting to a thyroid operation by competent surgeons must feel a sense of humiliation to think what dupes they were to have submitted to the knife when a few manipulations of their goitres or other parts of their anatomies would have produced the same results!

It is reported that the Post Master General has issued an order to the effect that post masters must be in their offices eight hours a day and not absent themselves therefrom longer than one-half hour on weekdays without special permission. It is very evident that someone has been getting on to the fact that most post masters in the larger towns and cities are mere figureheads, that the real work is done by the office help, and oftentimes the morale is sadly deficient as a result of the easy going methods of the chief. There is certainly room for great improvement in most federal offices and the post office department is no exception.

POLIOMYELITIS is on the increase, there being many more cases in 1920 than during the previous year, and this year the number of cases is even still greater. The peculiar feature about the disease is that it appears in isolated cases and does not show any tendency to occur as an epidemic. The majority of the cases are in children, though there is a good percentage of

cases occurring in adults. Paralyzes are, in most instances, not severe. The increased prevalence of the disease seems to indicate greater precaution on the part of health authorities in discovering unreported or unrecognized cases and in taking all precautions to avoid an epidemic of serious consequences.

THE bacteriological laboratory of the Indiana State Board of Health makes many examinations during the course of the year and so far as we know no fees are collected for the services. As a matter of fact there is no reason why a fee should not be charged in those instances where the patient is able to pay a fee. In reality the well-to-do should pay for their laboratory work just as they pay for anything else. There is no reason why the State should help to pauperize the community by doing free laboratory work for any who may ask it, to say nothing of entering into competition with hundreds of men who are doing laboratory work as all or a part of the vocation and from which they are making a living.

FOR the benefit of the large number of State Journals that exchange with us we desire to call attention to the necessity of determining where the delegates to the A. M. A. stand on many questions of vital interest to the welfare of the medical profession at large. We have had examples of what some of the leaders in the profession would do to us if they have their way. It is time to know something about the attitude of those whom we send to represent us at the great parent organization which supposedly represents the voice of a very large majority of the medical men in this country. The trouble of it is we sometimes are betrayed, and if necessary, in order to have our wishes respected, our delegates ought to go instructed.

TO those authors who may desire reprints of their papers as they appear in THE JOURNAL, we desire to say that the management has nothing to do with the reprint proposition except to employ printers possessing reputation and facilities justifying the opinion that they will take care of the matter in a satisfactory manner. The printers have made a rule to which no reasonable doctor can take exception, to the effect that check in advance must cover cost of any and all reprints. This is no reflection upon the financial credit of any author, but is necessary in order to avoid the annoyance and expense of determining credits and carrying many unnecessary small accounts. All orders for reprints must accompany the corrected proof returned by authors.

A WELL known advertising firm has sent out to many physicians a questionnaire asking about the medicinal value of raisins. It frankly admitted that the information is to be used in helping to advertise the raisins raised and marketed by growers of California. No stamped envelope is inclosed with the request, which shows the "nerve" of some of the advertising agencies in expecting to get something for nothing. Perhaps there will be many physicians who will be silly enough to answer the questionnaire, and it is barely possible that a few physicians who are mentally warped will give raisins the credit of being good for everything from tuberculosis to ingrowing toenail. However, the scheme mentioned is a smooth way to get endorsement for anything that is to be marketed and which may require some endorsement in order to sell well.

AT present the United States has one doctor to 720 persons and Canada has one doctor to 1050 persons. Of course, this ratio is very much greater for the cities. In fact, all cities and towns in the United States have more doctors than are actually necessary, and the same thing is true in Canada. The country districts in both the United States and Canada are suffering for the want of medical service. Doctors, like the majority of people in other vocations, prefer the cities, and flock there even though remuneration is less than it would be in the towns and villages. One of the problems to be solved is how to get competent medical service to the sparsely settled communities. There ought to be enough medical men who like country life sufficiently, and with it a respectable income, to justify locating in the towns and villages for the practice of medicine.

FROM actual knowledge we know that a few of the members of our Association are giving credence to some of the specious claims of pharmaceutical houses concerning the virtues of some of the proprietary preparations of secret formula that have been openly condemned as worthless or nearly worthless by the Council on Pharmacy and Chemistry of the A. M. A. We suggest that doctors go a little slow in accepting the extravagant claims put forth by various pharmaceutical manufacturers concerning preparations that have not been tested and approved in a manner which all men can accept. Usually information may be obtained by referring to *New and Nonofficial Remedies*, and *Propaganda for Reform*, published by the A. M. A., or, in case such books are not available, a reliable answer may be obtained by addressing the Council on Pharmacy and Chemistry of the A. M. A., 535 North Dearborn Street, Chicago, Illinois.

THE nerve of some of the social uplifters is astonishing. Recently a doctor who donates considerable time and skill to the alleviation of the sick poor of one of Indiana's cities was asked for a money contribution by a female soliciting committee for the purpose of supplying medical attention to those of the city entitled to charity. When told that doctors contributed more of real money value to charity than any of the citizens following other vocations, and contributed liberally to other philanthropies as well, the aforesaid female soliciting committee thought the doctor was quite stingy, and they bolstered up their further request for a donation by saying that the services donated to the poor should not be placed on a contribution basis.

Of all of the abuses that members of the medical profession suffer from, that of furnishing gratuitous medical and surgical services to the sick poor is one of the worst, and for which little credit is given, but Lord deliver us from the female soliciting committees that operate without rhyme or reason!

As a species of imposition to which doctors are subjected an example is offered in the request from life insurance companies for detailed and technical information concerning the prospective policyholders who have been the patients of the doctors from whom information is solicited. These reports, requiring time and effort on the part of the doctor, are solicited on the ground that a favor is being shown the patron of the doctor, when in reality it is a favor to the insurance company, and is but another method of securing something for nothing, so commonly practiced by insurance companies when dealing with the medical profession. Of course, the great insurance companies are objects of charity, and they always can find enough "easy marks" in the medical profession to justify the attitude of driving sharp bargains for medical examinations or the procuring of any information that furthers their business interests. As one prominent insurance man said to the editor of *THE JOURNAL*, "You doctors are a lot of suckers to bite at the bait thrown out by insurance companies, but as long as you are willing to bite why shouldn't we take advantage of it and profit thereby, for we are not in business for our health or for sentimental reasons."

SOME of the officers and employees of our Federal government do not possess even mule sense, let alone good horse sense. An instance of this is the request on the part of a government auditor for a report and detailed description of each treatment given to a veteran entitled to gratuitous services on the part of the

government. Inasmuch as the affection was an acute affair, subsided in the usual length of time under the recognized proper treatment for it, and a detailed description of the several treatments would be unnecessary as well as superfluous for the edification of anyone with anything more than half a brain, we fail to understand why Uncle Sam should retain in his employ an auditor who exhibits so little evidence of being worthy of a position of responsibility. The present administration promised reform in the way of removing incompetent office holders, and eliminating the idiotic red tape which surrounds so many government transactions. Up to the present time we have not seen very much evidence of reform, but we hope to see something of it before long, as there is great need for the discharge of a lot of brainless employees who not only hinder the efficient conduct of governmental affairs, but are an extravagant and useless expense to the taxpayers.

ONE of our correspondents complains about the increasing number of six weeks' specialists, and very appropriately remarks that they are about as dangerous as the chiropractors or members of any other pseudo-medical cult who try to do something without knowing how. However, in view of our difficulty in securing a legal standard of requirements for the practice of medicine, it is not surprising that we should have some difficulty in securing some recognized standard for the practice of the various specialties. The more ignorant the general practitioner, the more likely he is to assume responsibility for which he is illy fitted, and he does not hesitate to pose as a surgeon, or specialist of any kind, as long as the patient is willing to submit to his ministrations and the doctor can secure financial gain thereby. While admitting that the man who has had four years of medical training in any of our good medical schools is far more worthy of the confidence of the public than any of the members of the pseudo-medical cults who have little or no training concerning the methods of recognizing and treating disease conditions, yet we must admit that we need a little house-cleaning in our own profession in weeding out incompetents, or perhaps we ought to say in the preventing of incompetents from doing work for which they are not qualified by either experience or training.

THE article entitled "The Truth About Vivisection," by an animal lover, Ernest Harold Baynes, published in the July number of the *Woman's Home Companion*, should have wide distribution among lay persons who may have been influenced by the misleading, untrue and

vicious statements promulgated by the Anti-Vivisectionists. At the conclusion of the article Mr. Baynes says, "In this article I have sought to give facts and allow my readers to make their own deductions. I honestly believe that some of the people who are preparing literature against vivisection are either making statements which they know to be untrue and misleading, or are deliberately closing their minds to the truth in its larger aspect." After showing up the Anti-Vivisectionists in their true light as purveyors of falsehoods and in the distortion of evidence to further their own ends, Mr. Baynes says, "I would not present this case nor would the *Woman's Home Companion* publish it if we did not both believe that it is of the utmost importance to the human race, and to animals as well, that medicine and surgery be allowed to advance unhampered by ignorance, prejudice and sentimentality." Having been thoroughly exposed by a layman, who makes no statement without ample evidence to support it, the Anti-Vivisectionists, through one of their wild-eyed enthusiasts, attempt a retaliation by asking all Anti-Vivisectionists and lovers of animals to boycott the *Woman's Home Companion*. Enough said!

A CERTAIN New York oculist has been writing books and pamphlets, evidently for advertising purposes, in which he makes some very irrational and absurd statements concerning anatomy and physiology of the eye; as well as treatment of eye abnormalities. As might be expected several newspapers and lay periodicals, believing that the statements published emanated from a recognized authority, are publishing some of the erroneous views expressed, very naturally increasing the prestige and probably the financial income of the originator of the ideas. One of the wild tales commented upon by even such periodicals as *Leslie's* and the *Literary Digest* is the one which concerns the recognition of the liar by means of the retinoscope, due to the alleged fact that when a person tells an untruth an error of refraction (myopia) is produced "because it is impossible to state or imagine what is not true without an effort". On the same theory we might suppose that when a person tells an untruth, any of the other involuntary muscular actions could occur. The absurdity of saying that temporary myopia always is produced by an individual who is not telling the truth requires no attention at the hands of those who believe in the scientific soundness of any theory advanced before its acceptance. In fact, the physician who promulgated all of these wild theories that have received so much attention from lay periodicals has been considered "nutty" by probably all of

the reputable ophthalmologists. It is unfortunate that he should be taken so seriously by the lay public.

REED & CARNRICK issue a little proprietary journal called *The Medical Pocket Quarterly* which, aside from its advertising pabulum, frequently publishes some editorial comments which not only contain good common sense but are worth pondering over by physicians. In the September number we find something that perhaps our readers may not have seen and which we herewith reproduce:

WHY?

Why does a lawyer get \$10—without moving from his seat—for making out a lease that any trained stenographer can fill out in ten minutes, while a physician gets only \$1 to \$3 for diagnosing and prescribing for a patient's ills, the correction of which will keep him fit to earn thousands?

Why does a mechanical engineer get \$50 to \$250 for looking over a plant and telling a manufacturer where to place machinery so as to get out of it maximum efficiency, and a physician get 1/25 to 1/125th that sum for looking over a man and telling him how to get the maximum efficiency out of himself?

Why are attorneys able to collect their fees usually in advance and doctors two months to a year after service is rendered, if they ever get them at all?

Why do doctors give away \$100,000,000 worth of free service a year in hospitals, clinics, home and office treatment, while other men give away nothing?

Why are butchers, bakers, grocers and milkmen without education, many hardly able to read or write, able to earn more money than thousands of physicians with education?

Why do legislatures concede to lawyers practically every request they make for laws increasing the emoluments and safeguarding the interest of their profession and refuse practically all requests for increasing the emoluments and protecting the interest of physicians engaged in public health work and otherwise?

Why do doctors have to work 14 to 18 hours a day, seven days a week, to earn the monetary rewards of mechanics and other lay workers, working only 8 hours a day, five days a week and half a day Saturday, with all holidays off?

Why is it that a doctor making an honest mistake in the treatment of a patient is sued for malpractice and often mulcted in heavy damages, while a lawyer making the same honest mistake in the trial and handling of a client's case is never sued and never obliged to pay a cent of damages?

Why is it that we have to pay larger premiums for indemnity insurance than rum sellers, manufacturers employing workers at hazardous tasks, and almost every other type of risk?

BECAUSE WE ARE CONSIDERED THE SOFTEST AND EASIEST CLASS ON EARTH ON WHICH TO IMPOSE AND THE VALUE OF THE SERVICE WE RENDER THE WORLD THE LEAST APPRECIATED ISN'T IT TIME WE WOKE UP AND GOT ON OUR TOES—TIME WE BECAME MORE AGGRESSIVE FOR OUR RIGHTS?

DEATHS

J. A. SMITH, M.D., 83 years old, died at his home west of Brownsville, October 5.

SARAH EMMA PRESTON, wife of Dr. J. L. Preston, of Cloverdale, died July 21, 1921.

MRS. MARY E. ROBINSON, wife of G. M. Robinson, M. D., of Loogootee, died September 27, at her home.

J. W. ELLIOTT, M.D., died at his home in Linden, Indiana, September 27, at the age of 59 years. Dr. Elliott graduated from the Medical Department of the University of Louisville in 1897.

HELEN L. MURRAY, M.D., age 52 years, took her life at her home in South Bend, October 6, as a result of ill health. Dr. Murray was a graduate of the Indiana Medical College, School of Medicine of Purdue University, Indianapolis.

CHAMBERS M. LINDLEY, M.D., aged 89 years, died in the Methodist Hospital at Princeton, October 26. Dr. Lindley graduated from the Ohio College of Medicine, Cincinnati, in 1860, and was a member of the Gibson County Medical Society, the Indiana State Medical Association and the American Medical Association.

WILLIAM F. BATMAN, M.D., of Crawfordsville, died October 23, as a result of apoplexy, at the age of 63 years. Dr. Batman graduated from the Jefferson College of Medicine in 1880. He was a member of the Montgomery County Medical Society, the Indiana State Medical Association and the American Medical Association.

R. H. VAN CLEAVE, M.D., of Farmersburg, was struck by a train and instantly killed on October 15. He was 68 years of age. Dr. Van Cleave graduated from the Medical College of Evansville in 1879 and was a member of the Sullivan County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. SAMUEL HARRELL, of Noblesville, has resumed his practice after a prolonged illness.

THE Eleventh District Medical Society held its regular meeting at Marion, Indiana, October 20.

REV. HENRY W. VITZ, superintendent of the Protestant Deaconess Hospital of Indianapolis, died October 16.

DR. RALPH EMERSON MCINDOO and Miss Phronsie Lucille Martin, both of Kokomo, were married October 15.

DR. E. S. FISHER, formerly of Markle, has removed to Bluffton where he will reside and practice medicine.

THE Tipton County Medical Society was entertained by Dr. and Mrs. John W. Cooper of Kempton, October 5.

DR. EMERSON BARNUM and Miss Pearl M. Coers, both of Manilla, Indiana, were married Thursday, October 6.

DR. VINCENT LAPENTA, of Indianapolis, has been appointed royal consular regent of Italy for the state of Indiana.

THE Whitley County Medical Society held a meeting at Columbia City, October 11. A paper was presented by Dr. E. V. Nolt.

DR. DALE C. WEIR has removed from Mongo, Indiana, to Three Rivers, Michigan, where he will take up the practice of medicine.

DR. HOMER C. GLOCK has been appointed as a member of the city board of health of Fort Wayne to succeed the late Dr. A. J. Kesler.

DR. J. W. BENHAM, of Columbus, will spend the winter in Chicago where he will take special work in eye, ear, nose and throat diseases.

THE training school of the St. Vincent's Hospital of Indianapolis held commencement exercises October 27, seventeen nurses receiving diplomas.

MISS JUNE GRAY, of Indianapolis, was elected president of the Indiana State Nurses' Association at the recent annual convention held in Indianapolis.

DR. G. L. REA has resigned his position as head of the public venereal clinic in Fort Wayne to take charge of a venereal clinic in Charlotte, North Carolina.

MRS. LUCIAN HARRIS, of Rising Sun, has been appointed a member of the board of trustees of the Southeastern Hospital for the Insane by Governor McCray.

DR. G. M. LASALLE, of Wabash, has resigned from the firm of Drs. Wilson, LaSalle and Whistler and will devote his time exclusively to the practice of surgery.

THE Randolph County Medical held its meeting at Winchester, October 10. Dr. C. E. Bodkin presented a paper on "Radium" and demonstrated the use of radium.

DR. CHARLES E. BARNETT, of Fort Wayne, was elected president of the Mississippi Valley Medical Association at the recent annual convention held in St. Louis.

THE Adams County Medical Society met Friday evening, September 24, at the home of Dr. C. P. Hinchman of Geneva. An address was given by Dr. Ben Beavers of Decatur.

THE regular monthly meeting of the Madison County Medical Society, held October 17, was addressed by Dr. Julius Hess, professor of children's diseases in Chicago University.

PROFESSOR SODDY, of Oxford University, took to London two grams of radium which England is to have the use of for fifteen years when it is to be returned to Czechoslovakia.

A BEQUEST of \$200,000.00 has been left to the medical school of Harvard University by Hiram F. Mills of Hingham, Massachusetts, for use in scientific research for a remedy for cancer.

DR. BYRON N. LINGEMAN, formerly with Dr. J. H. Barnhill of Indianapolis, is now associated with Dr. H. E. Greene, Joel Block, Crawfordsville, with practice limited to ear, nose and throat.

DR. and MRS. BERNARD RAVDIN, of Evansville, left October 16 for a six weeks' trip to New York and Philadelphia where Dr. Ravdin will take special work in the diseases of the eye, ear, nose and throat.

DR. PAUL T. HURT won the golf tournament conducted by the Indiana State Medical Association at Highland links, Indianapolis, Wednesday, September 28. Forty physicians were entered from throughout the state.

DR. W. A. HOLLIS, of Hartford City, attended the annual session of the American Academy of Ophthalmology and Otolaryngology and the Clinical Congress of Surgeons at Philadelphia. He returned about the first of November.

DR. J. D. McCANN, of Monticello, went to Chicago, October 22, where he attended the meeting of the Association of Pennsylvania Railway Surgeons, of which he is president, and the national meeting of the American Railway Surgeons.

DR. ALBERT E. BULSON, JR., spent the last two weeks of October in the East. While there he attended the annual session of the American

Academy of Ophthalmology and Otolaryngology and the Clinical Congress of the American College of Surgeons in Philadelphia.

THE Eye Sight Conservation Council of America is a recently formed organization, with headquarters in New York City, which purposes to create a greater appreciation of the importance of the care of the eye. The council is supported by voluntary contributions.

DR. J. O. RITCHEY has been appointed superintendent of the city dispensary at Indianapolis to replace Robert E. Neff, who resigned. The Board of Public Health also appointed Dr. Philip H. Sheridan as district physician for the dispensary to succeed Dr. George Bowman, who resigned.

THE School of Hygiene of Johns Hopkins University will send an expedition in May, 1922, to study the problems of health among the Eskimos in Labrador. Dr. Victor E. Levine of the Creighton School of Medicine, Omaha, will go in advance for a preliminary survey of the climatic conditions.

THE DeKalb County Medical Society held a meeting at Garrett, October 13. A clinic was held at the Sacred Heart Hospital, and at the banquet, served by the Sisters, a paper was presented by Dr. House, his subject being "The Conscious and Sub-conscious Mind and Its Effect on the Physical Condition."

DRS. JAMES R. and JOHN W. NORREL, J. T. JOHNSON and S. H. J. DAVID will establish a hospital at 769 Indiana Avenue, Indianapolis, Indiana, for the exclusive treatment of negroes. The hospital will include a nurses' training school for colored nurses. It will be operated under the name of the Provident Sanitarium Association.

THE Howard County Medical Society held its regular monthly meeting at Kokomo, October 7. Dr. F. S. Cuthbert presented the main paper of the evening, the subject of which was "Diagnosis of some of the more frequently met with complications in the eye, ear, nose and throat practice as it concerns the general practitioner."

THE first fall meeting of the Muncie Academy of Medicine was held at the Hotel Roberts, Muncie, October 23. About 250 physicians were present. The main address of the evening was presented by Dr. I. O. Porter, of Buffalo, N. Y., who is president of the American Gynecological and Obstetrical Society. His subject was "Versions."

THE National Anesthesia Research Society, in convention at Kansas City, October 25, presented a silver loving cup to Dr. Arthur E. Guedel, of Indianapolis, in appreciation of his pioneer work in nitrous oxide obstetric anesthesia. Dr. Guedel has assumed charge of the anesthesia department of St. Vincent's Hospital, Indianapolis.

THE first American Birth Control Conference has been called in New York City for November 11, 12, and 13. There will be discussions on the question of population and social aspect, medical aspect and private discussion of practical methods by authorized delegates, and mass meeting and organization of an American Birth Control League.

MISS ANNETTE B. COWLES of the City Hospital, Indianapolis, was elected president of the Indiana League of Nursing Education at the nineteenth annual convention of the Indiana Nurses' Association. Miss Mary Peterson, of the Robert W. Long Hospital, was made vice-president, and Miss I. L. Goepinger, of the Deaconess Hospital, was made secretary-treasurer.

THE Muncie Academy of Medicine held a meeting at the Hotel Roberts, Muncie, October 28. A paper was given by Dr. Martin H. Fischer, professor of physiology of the University of Cincinnati, on the subject of "Arteriosclerosis". Dr. C. P. Emerson of Indianapolis, Dr. G. W. McCaskey of Fort Wayne, and Dr. Weir Miley of Anderson lead the discussion of Dr. Fischer's paper.

It was stated at the annual convention of the International Association of Industrial Accident Boards, held in Chicago, September 20, that the economic loss caused by industrial accidents amounted to about \$1,000,000,000. The wage loss approximated \$853,000,000 and other costs, including surgical, hospital and administrative expense in connection with compensable accidents, added \$161,000,000 to the bill.

PREPARATIONS were made for a drive to collect \$8,000,000 for the erection of hospitals by the Imperial Council of the Shrine at a meeting of the Hospital Committee held in St. Louis, September 25th. The central hospital, to cost approximately \$1,000,000, will be in St. Louis, with others at San Francisco; Shreveport, Louisiana; Portland, Oregon; Minneapolis or St. Paul, Minnesota, and Montreal.

A NUMBER of changes are announced in the faculty of the Yale Medical School. New professors are Dr. Francis G. Blake, Dr. John Slade

Ely, professors of medicine, and Dr. Edwards A. Park, professor of pediatrics. Dr. Arthur M. Morse is head of the department of obstetrics and gynecology. New associate professors are Dr. John P. Peters, Jr., department of medicine, and Dr. Alfred T. Shohle, department of pediatrics. Dr. Samuel C. Harvey is in charge of the surgical department of the school, assistant professors being Dr. Clyde L. Deming, urology; Dr. J. J. Morton, Jr., surgery; Dr. Grover F. Powers, pediatrics, and Dr. William C. Stadie, medicine. Dr. Eugene M. Blake has been made assistant clinical professor of ophthalmology.

DURING October the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Davis & Geck:

Kalmerid Germicidal Tablets,
Potassium-Mercuric-Iodide.

Eastman Kodak Company:

Eastman Barium Sulphate for Roentgenology.

Powers-Weightman-Rosengarten Co.:

Copper Citrate-P. W. R.
Mercury Benzoate-P. W. R.
Mercury Cyanide-P. W. R.
Mercury Succinimide-P. W. R.
Silver Citrate-P. W. R.
Silver Lactate-P. W. R.

Solution Arsphenamine-Lowy: This product has been acquired by E. R. Squibb & Sons, and is retained in New and Nonofficial Remedies as Solution Arsphenamine-Squibb.

A fraternal organization asked a disciple of one of the pseudo-medical cults for a statement concerning an examination of one of their members. The report, given with accuracy but with names omitted, was as follows:

TO WHOM IT MAY CONCERN:

This certifies that Mr. _____ presented himself at my office for physical examination on August 12, 1919.

Upon examination we found the following condition:
A diastolic heart murmur.
Blood pressure low.
Patient losing flesh, is thin and emaciated.
Stomach and bowels full flatus.
Appetite poor.
Constipation.

A moderate hypodosis of thoracic spine.
Loodosis of cervical and lumbar spine.
Both of above areas of spine markedly stiff and tense.

Patient was advised to rest with treatment, with which he is now complying with improvement.

J. L. W_____,
D.O.M.D.D.P.H.

The contributor who favors us with this piece of literature says that the patient is still living and that it is fortunate that such a skillful "doctor", who requires seven letters to enumerate his numerous degrees, had the case in hand.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8
22.	Fulton	A. E. Stinson	15	17
23.	Jay	C. A. Paddock	18	20
24.	Lake	E. E. Evans	84	95
25.	Marshall	T. C. Eley	20	22
26.	Morgan	C. G. Bothwell	11	13
27.	Vanderburgh	Pierce McKenzie	72	82

INDIANA STATE MEDICAL ASSOCIATION

Indianapolis Session, September, 1921

HOUSE OF DELEGATES—FIRST MEETING

The first meeting of the House of Delegates was called to order at seven o'clock, September 28, 1921, by the President, Dr. David Ross of Indianapolis.

Charles N. Combs, the Secretary, called the roll of delegates, and there being a quorum present the House was declared in session.

The President called for the reading of the minutes of the previous session, but on motion of Dr. George R. Daniels, Marion, duly seconded, the minutes as printed in the September number of THE JOURNAL were adopted and the reading at this time dispensed with.

It was moved by Dr. G. D. Miller, Logansport, that the Report of the Secretary-Treasurer as printed in THE JOURNAL be accepted. Motion seconded and carried.

The Secretary mentioned one item of his report—the making of Dr. G. W. H. Kemper an honorary member of this Association, thus making him eligible to be made an Affiliate Fellow of the American Medical Association. It was moved by Dr. William R. Moffit, Lafayette, that Dr. Kemper be made an honorary member of this Association. Motion seconded by Dr. George W. Finley, Brazil, and many others, and unanimously carried by rising vote.

Dr. George F. Keiper, Lafayette, then called attention to another item of the Secretary's report—the long service of some of the county secretaries, especially that of Dr. Allen Pierson, of Spencer, and moved that the congratulations of the Association be extended to Dr. Pierson for his forty years of continuous service in this capacity. Motion seconded and unanimously carried by rising vote.

On motion of Dr. George R. Daniels, Marion, the reports of standing committees as printed were adopted.

The Secretary then read, under the head of "Communications", a letter from Mrs. Marie D. Gorgas, thanking the Association for the resolution of a year ago regarding General Gorgas; also a letter from Dr. G. W. H. Kemper, now in Pasadena, California, to the House of Delegates, which was as follows:

To the House of Delegates of the Indiana State Medical Association:

It is fifty-four years since I attended the Indiana State Medical Association for the first time; this was at the May session of 1867. Since that date I have

missed only a few sessions. I learned to cherish these yearly assemblies with a great deal of delight, for they were my true vacation periods—periods of pleasure and profit.

Those were years when the "Transactions" were issued annually and these were in their infancy—merely pamphlets in paper backs. They were not dignified with muslin enclosure until about the year 1874, and this was the fashion until they ceased to exist in 1907, giving way to our splendid Journal in 1908. These pamphlets and volumes—58 in number (1847-1907)—contained 1202 articles contributed by 481 physicians and scientific men. Many of these essays may be read with advantage at the present day when we have made so much advancement in medical science.

When I attended the session of the State Medical Association of 1867, I met with a number of remarkable men. They were no ordinary physicians for that period. All have gone upon that unreturning visit. Here again I met Dr. John S. Bobbs. I first saw him on the 24th day of May, 1861, when I was a private soldier in Co. B of the 7th Regiment, Indiana Volunteer Infantry—three months' service. On the day named five of the Indiana regiments were reviewed at Indianapolis, by General George B. McClellan. On this occasion Dr. Bobbs rode with the three Governors: Morton of Indiana, Dennison of Ohio, and Yates of Illinois. These men, and I presume nearly all the men into whose faces they looked at that parade, have fallen asleep. I believe I am the "last leaf" of the early members of the Indiana State Medical Association. I am not aware of others. Possibly I am the ranking living member. The Association always has treated me liberally. For a number of years I was treasurer. I am the senior living ex-president of the society, having been elected president in 1886, and presided the following year—1887—thirty-four years ago last May. I was elected the first delegate to the American Medical Association in 1902. I held the position of councillor from 1903 to 1920. I served twenty years as chairman of the committee on necrology. I am sure that my medical brethren will pardon these personal references in this letter. I simply dropped into a historical reverie for the moment.

It would afford me much pleasure to meet with the Association which will convene this present month, but I am far away. Possibly it is better that I remain for a longer period in this milder climate. California, with its beautiful hills, valleys and mountains decorated with lovely flowers, is unsurpassed by no other country that I have visited. And yet, I love more dearly my own native state of Indiana. In that fine poem—"The Deserted Village"—Goldsmith makes his poet wish that after his long and wild wanderings were over that he might find a burial spot in his early home.

"And as the hare whom hounds and horns pursue,
Pants to the place from which at first she flew;
So had I hoped, life's long vexation past,
Here to return and die at home at last."

My health has gradually improved—thanks to my good friend, Dr. W. N. Wishard, and a Kind Providence.

With love for the Association and all its members,
G. W. H. KEMPER.

Pasadena, Calif., Sept. 20, 1921.
1239 E. Orange Grove Ave.

It was taken by consent that the letter of Mrs. Gorgas be filed as a matter of record, and that the Secretary be instructed to reply to Dr. Kemper's letter.

Dr. William R. Phillips, of Connersville, then spoke on the subject of medical legislation, especially that affecting the Medical Practice Act. This discussion was continued by Drs. J. A. Craig, Greenwood; Edward E. Evans, Gary; Charles H. McCully, Logansport; Elmer E. Morgan, Fort Wayne, and G. G. Eckhart, Marion.

It was then moved by Dr. Wm. R. Phillips that a committee of five be appointed by the Chair to draw up resolutions covering this matter, this committee to report to the House of Delegates Friday morning. Motion seconded by Dr. Franklin S. Crockett, Lafayette, and carried.

The president appointed the following committee: William R. Phillips, Connersville; George R. Daniels, Marion; J. A. Craig, Greenwood; Franklin S. Crockett, Lafayette; Edward E. Evans, Gary.

Dr. George F. Keiper then called attention to the Indiana State Hospital Association, recently organized, and moved that this Association send its greetings and best wishes to the Hospital Association. Motion seconded and carried.

No further business appearing, the House of Delegates adjourned until Friday morning at eleven.

CHAS. N. COMBS, Secretary.

HOUSE OF DELEGATES—SECOND MEETING

The second meeting of the House of Delegates was called to order by President Dr. David Ross at 11:00 a. m., Friday, September 30th.

Election of officers for the year 1922 was the first order of business, and resulted as follows:

President—Dr. W. R. Davidson, Evansville.

First Vice-Pres.—Dr. Thomas M. Jones, Anderson.

Second Vice-Pres.—Dr. John H. Reed, Logansport.

Third Vice-Pres.—Dr. E. S. Jones, Hammond.

Sec'y-Treas.—Dr. Charles N. Combs, Terre Haute (re-elected).

Delegates to the American Medical Association for the ensuing two years: Dr. Albert E. Bulson, Jr., Fort Wayne; Dr. George F. Keiper, Lafayette.

Alternates: Dr. E. H. Griswold, Peru; Dr. Harry Elliott, Brazil.

Dr. E. M. Shanklin, of Hammond, was re-elected chairman of the Committee on Administration and Medical Defense for the ensuing three years.

Dr. W. H. Stemmi, of North Vernon, was re-elected on the Committee on Hospital Standardization for the ensuing five years.

The following councillors were elected, their terms to expire December 31, 1924: Second District, Joseph Schmadel, Vincennes; Fifth District, Joseph H. Weinstein, Terre Haute.

The eighth and eleventh councillor districts reported that their councillor would be elected before the end of the year.

Dr. W. R. Phillips, Connersville, submitted the report of his committee Wednesday night, and, as amended, was adopted as follows:

WHEREAS, The past decade has demonstrated the extreme difficulty of securing the passage of good medical legislation or of measures designed to strengthen the present laws, and

WHEREAS, There is an increasing tendency on the part of certain cults and classes to ignore laws as they now exist, and

WHEREAS, Such conditions tend to undermine the laws of the state and to weaken and eventually destroy the medical fabric as it now exists, thereby producing an irreparable loss to all concerned; therefore be it

RESOLVED, That it is the sense of this Association that we should, within the body of the profession itself, seek to build up a method of defense of the rights of the profession and of the safety of the public at large. Be it further

RESOLVED, That we urge that greater power be given the Committee on Public Policy and Legislation, and that a standing vote of thanks and appreciation be accorded the venerable and honorable chairman of the Committee, Dr. Wm. N. Wishard, for his untiring and ceaseless efforts to upbuild and uphold the legal fabric of the profession of Indiana. Be it further

RESOLVED, That we seek to promulgate a stronger organization to bring about a closer and more complete and efficient co-operation among the several county societies; and be it further

RESOLVED, That any of the funds of the Association not in excess of \$5,000 be, and the same is hereby rendered available, under the direction of the Council, for the investigation and prosecution of violation of the present medical laws.

Dr. Lafayette Page, of Indianapolis, spoke on the needs of the proposed Riley Memorial Hospital, and appealed for its support.

Dr. Albert E. Bulson, Jr., moved that the Indiana State Medical Association endorse the project of establishing the Riley Memorial Hospital for *indigent* children of the State.

Moved, seconded and carried.

Dr. J. R. Newcomb, Indianapolis, moved that we heartily endorse the invitation of the Eye, Ear, Nose and Throat Section of this Association to the Academy of Ophthalmology and Otolaryngology to hold its 1922 session in Indianapolis.

Consent.

Dr. A. E. Sterne, Indianapolis, chairman of the Committee on Hospital Standardization, introduced the following resolution as a supplementary report, and, after considerable discussion, it was adopted as follows:

Realizing that the Hospital Standardization Classification in Indiana and other states of the United States is admittedly confused and chaotic, chiefly for the reason that different agencies are attempting to classify hospitals and institutions without concerted, considerate effort, and, realizing further, that a continuance of such a policy will maintain and augment the chaos and difficulties of the entire hospital question, and believing that the A. M. A. through its Council on Education and Hospitals should assume and retain the leadership in this matter, and affirming its confidence in the ability and integrity of this leadership, the House of Delegates of the Indiana State Medical Association petitions the Council on Education and Hospitals of the A. M. A. and respectfully suggests:

First, That the Council invite the proper committees of various recognized medical organizations, actively engaged in hospital standardization work, to meet in joint conference, in order to unify and co-ordinate the efforts of the several organizations to attain a standard classification of the hospitals of the United States; and

Second, Further suggests that the Council on Medical Education and Hospitals, at an early date and appointed place, call a meeting of the chairmen and other members of the Hospital Standardization Committees of the component state medical associations, and any other properly accredited delegates from these associations, in order that this work may be conducted in the various states upon similar lines and upon unified standards.

Dr. J. M. McCoy, of Vincennes, proposed that the Association investigate the plan of adopting group automobile liability insurance for the members. The incoming president was instructed to appoint a committee of five to investigate this question.

Dr. George R. Daniels, Marion, moved a vote of thanks to the Indianapolis Medical Society for the splendid entertainment provided for this annual session.

Carried.

By unanimous vote, the next annual session is to be held at Muncie, September 27th, 28th and 29th, 1922.

Adjournment.

CHAS. N. COMBS, Secretary.

THE COUNCIL—FIRST MEETING

The first meeting of the Council was held at the Claypool Hotel, Indianapolis, Wednesday, September 28th, at 4:30 p. m. Called to order by the Chairman, Dr. E. M. Shanklin.

Present: Drs. S. E. Earp, W. R. Moffit, E. M. Shanklin, J. B. Berteling, G. G. Eckhart, C. N. Combs and President Dr. David Ross.

The minutes of the previous meetings were read and accepted.

The councilors made reports of their respective districts, and discussion ensued concerning the status of the profession in Starke County. An effort will be made before the end of this year to rehabilitate the Starke County Medical Society, or if that is not possible, the county will be joined to that of Pulaski.

A letter was read from Dr. W. N. Wishard, urging the annual publication of the list of members of the Indiana State Medical Association to be available for officers and committeemen. The secretary was instructed to ask the editor to publish this list in the December number of *THE JOURNAL*.

Adjourned. CHAS. N. COMBS, Secretary.

THE COUNCIL—SECOND MEETING

The last meeting of the Council was held Friday, September 30th, at 1:30 p. m.

Present: Drs. S. E. Earp, W. R. Moffit, W. J. Leach, F. J. Spilman, J. H. Willis, A. E. Bulson, Jr., and C. N. Combs.

After discussing the funds to be made available for the new Committee on Public Policy and Legislation, it was moved and carried that the Council ask the new Committee to attend the mid-winter meeting of the Council in January.

It was suggested that the annual session would be more notable if out-of-state guests were invited by each section, and the Council recommends to the section officers to invite a guest for each section for the coming session.

Adjournment. CHAS. N. COMBS, Secretary.

MINUTES OF GENERAL MEETING

Indianapolis Session, September, 1921

The first general meeting of the Indiana State Medical Association was called to order at nine a. m., September 29, 1921, in the Assembly Room of the Claypool Hotel, Indianapolis, by the President, Dr. David Ross, of Indianapolis.

The Mayor of Indianapolis was not present, but Dr. Ross in a few words welcomed the members of the Association.

Dr. Miles F. Porter, of Fort Wayne, was given the privilege of the floor for a few minutes to present the claims of the American Society for the Control of Cancer. Dr. Porter is the Chairman of the Indiana branch of this Society.

The President, Dr. David Ross, of Indianapolis, read his address, entitled "Medicine and State Control". (Published in this number of *THE JOURNAL*.)

Dr. B. W. Rhamy, of Fort Wayne, read a paper entitled "Ulcer of the Stomach and Duodenum: Etiology and Pathology."

Dr. W. H. Foreman, Indianapolis, read a paper on "Ulcer of the Stomach and Duodenum: Diagnosis and Medical Treatment."

Dr. J. R. Eastman, Indianapolis, read a paper entitled "Ulcer of the Stomach and Duodenum: Surgical Technique."

The above symposium was discussed by Drs. Miles F. Porter, Fort Wayne; A. B. Graham, Indianapolis; W. D. Asbury, Terre Haute; Frank W. Foxworthy, Indianapolis; G. W. McCaskey, Fort Wayne; H. O. Pantzer, Indianapolis, and in closing by Drs. W. H. Foreman and J. R. Eastman.

Dr. Charles P. Emerson, Indianapolis, read a paper entitled "Treatment of Chronic Nephritis". This paper was discussed by Drs. G. W. McCaskey, Fort Wayne, and E. F. Kiser, Indianapolis.

The General Meeting adjourned until Friday afternoon at two o'clock.

Second Meeting

The second General Meeting of the Indiana State Medical Association was called to order at 2:20 p. m., September 30, 1921, by the First Vice-President, Dr. Hugh J. White of Hammond.

Dr. H. R. Allen, Indianapolis, read a paper entitled "The Treatment of Club Feet". This paper was discussed by Drs. G. D. Marshall, Kokomo; Oscar T. Scamahorn, Pittsboro, and by Dr. H. R. Allen in closing.

Dr. G. B. Jackson, Indianapolis, presented a paper on "Sterility in the Female". This paper was discussed by Dr. O. G. Pfaff, Indianapolis, and Dr. Arnold Provine, Franklin.

The chairman then announced that Dr. W. R. Davidson, of Evansville, had been elected President of the Association for the ensuing year, and that the place of meeting for 1922 would be Muncie.

Dr. E. B. Mumford, Indianapolis, read a paper entitled "The Treatment of Compound Fractures". This paper was discussed by Drs. H. O. Bruggeman, Fort Wayne; H. R. Allen, Indianapolis, and the discussion closed by Dr. E. B. Mumford.

Dr. W. U. Kennedy, Newcastle, read a paper entitled "Traumatic Abdominal Injuries". This paper was discussed by Dr. W. P. Williams, Lebanon, and the discussion closed by Dr. W. U. Kennedy.

The program being finished, the General Meeting adjourned.

MINUTES OF SECTION ON SURGERY

Indianapolis Session, September, 1921

The first meeting of the Section on Surgery was called to order at 2:10 p. m., September 29, 1921, in the Assembly Room of the Claypool Hotel, Indianapolis, by the Chairman, Dr. Charles C. Terry, of South Bend.

Dr. W. H. Baker, South Bend (together with Dr. M. W. Lyon, Jr.), presented a paper on "Cecal Tuberculosis". This paper was discussed by Drs. J. H. Eberwein, Indianapolis; A. S. Jaeger, Indianapolis; John Sluss, Indianapolis; B. Van Sweringen, Fort Wayne; Goethe Link, Indianapolis; W. H. Williams, Lebanon, and in closing by Dr. W. H. Baker.

Dr. H. K. Bonn, Indianapolis, read a paper entitled "Operative Injury of the Hepatic and Common Bile Ducts. Methods of Avoidance and Repair." This paper was discussed by Drs. H. O. Shafer, Rochester; Goethe Link, Indianapolis; B. Van Sweringen, Fort Wayne; Ernest I. Brenner, Winchester; A. S. Jaeger, Indianapolis, and in closing by Dr. H. K. Bonn.

Dr. Murray N. Hadley, Indianapolis, read a paper entitled "Local Anesthesia as a Supplement to General Narcosis". This paper was discussed by Drs. A. C. Arnett, Lafayette; Frank H. Jett, Terre Haute, and the discussion closed by Dr. M. N. Hadley.

Dr. James Y. Welborn, Evansville, read a paper entitled "Conclusions from My Experience in Appendicitis". This paper was discussed by Dr. G. D. Scott, Sullivan, and in closing by Dr. James Y. Welborn.

Dr. A. S. Jaeger, Indianapolis, read a paper entitled "Notes on the Treatment of Septic Infection Following Delivery or Abortion". This paper was discussed by Drs. Joseph H. Weinstein, Terre Haute; Frank S. Holland, Bloomington, and the discussion closed by Dr. A. S. Jaeger.

The Section adjourned until nine o'clock Friday morning.

Second Meeting

The second meeting of the Section on Surgery was called to order at 9:25 a. m., September 30, 1921, by the Vice Chairman, Dr. H. K. Bonn, of Indianapolis.

The paper of Dr. P. E. McCown, Indianapolis, on "Non-Tuberculous Infection of the Kidney" was read by Dr. Frank G. McCarthy, of Terre Haute, Dr. McCown being absent on account of illness. This paper was discussed by Drs. Charles Barnett, Fort Wayne; Bernard Erdman, Indianapolis; H. O. Mertz, Indianapolis, and J. F. Cameron, Fort Wayne.

Drs. J. H. Oliver and V. H. Moon read papers on "Osteitis Fibrosa and Osteitis Fibrosa Cystica". These papers were discussed by Drs. Charles M. Mix, Muncie; G. D. Marshall, Kokomo.

The election of officers for this Section took place at this time, resulting as follows: Chairman, A. S. Jaeger, Indianapolis; Vice Chairman, T. C. Kennedy, Indianapolis; Secretary, H. W. McDonald, Newcastle.

Dr. Stanley A. Clark, South Bend, read a paper on "The Treatment of Cancer of the Uterine Cervix". This paper was discussed by Drs. Grace Line Homan, Laporte; George Kohlstadt, Indianapolis; Albert M. Cole, Indianapolis; Thomas C. Kennedy, Indianapolis; O. E. Spurgeon, Muncie; H. O. Shafer, Rochester, and in closing by Dr. Stanley A. Clark.

Dr. W. D. Gatch, Indianapolis, read a paper entitled "The Clinical History of Tumors of the Face and Jaws as a Guide to Their Correct Diagnosis and Proper Treatment". This paper was discussed by Drs. T. C. Kennedy, Indianapolis; Albert M. Cole, Indianapolis; Edwin X. Kime, Indianapolis; W. U. Kennedy, Newcastle; H. K. Bonn, Indianapolis, and in closing by Dr. W. D. Gatch.

The Section adjourned.

MINUTES OF THE SECTION ON MEDICINE Indianapolis Session, September, 1921

The first meeting of the Section on Medicine of the Indiana State Medical Association was called to order in the Claypool Hotel, Indianapolis, at 2:15 p. m., by the Vice-Chairman, Dr. George G. Richardson, Van Buren.

Dr. Maurice H. Krebs, Huntington, presented a paper on "Foreign Bodies Within the Respiratory Tract as Causative Factors in the Production of Pathological Conditions".

This paper was discussed by Drs. Alfred Henry, Indianapolis; C. A. Sellers, Hartford City; John Barnhill, Indianapolis; and George G. McConnell, Indianapolis, and the discussion was closed by Dr. Krebs.

Dr. W. A. Fankboner, Marion, read a paper on "Epidemic Encephalitis".

This paper was discussed by Drs. E. O. Daniels, Marion; Clay Ball, Muncie; George F. Beasley, Lafayette; Chas. F. Neu, Indianapolis; Chas. D. Humes, Indianapolis; P. B. Carter, and Albert E. Sterne, Indianapolis, and in closing by the essayist.

Dr. Jane Ketcham, Indianapolis, presented a paper on "Eclampsia".

This paper was discussed by Drs. Fred R. Clapp, South Bend; Chas. S. Bond, Richmond; Elmer E. Morgan, Fort Wayne; Wm. F. Smith, Huntington; Chas. H. Good, Huntington; Morris H. C. Johnson, Vincennes, and the discussion was closed by the essayist.

Dr. Charles G. Beall, Fort Wayne, read a paper entitled "Functional Nervous Disturbances in Soldiers and Civilians".

This paper was discussed by Drs. W. D. Asbury, Terre Haute; Chas. D. Humes, Indianapolis, and the discussion was closed by Dr. Beall.

The Chairman explained that Dr. James L. Gilbert, of Logansport, was unable to be present on account of illness, and moved that the Secretary be instructed to send a message of sympathy from the Section to Dr. Gilbert, and that his paper be released so that it might be read and published by Dr. Gilbert wherever he saw fit.

Supported by several members and unanimously carried.

Adjournment at 5:45 p. m. to reconvene at 9:00 a. m. Friday, September 30.

Second Meeting

The second meeting of the Section on Medicine was called to order at 9:00 a. m. by the Chairman, Dr. Fred R. Clapp, South Bend.

Election of Officers:

The following gentlemen were elected as Section Officers for the ensuing year: Chairman, Dr. Geo. G. Richardson, Van Buren; Vice-Chairman, Dr. Roscoe H. Beeson, Muncie; Secretary, Dr. Byrl R. Kirklin, Muncie.

Dr. Arlie R. Barnes, Rochester, Minnesota, presented a paper entitled "Bacteria Recovered Post-Mortem. With Special Reference to Selective Localization and Foci of Infection".

This contribution was discussed by Drs. Virgil Moon, Indianapolis; George W. McCaskey, Fort Wayne; Henry R. Alburger, Indianapolis; Frank Wynn, Indianapolis, and Robert V. Hoffman, South Bend, and in closing by the essayist.

Dr. R. V. Hoffman, South Bend, read a paper on "Some Problems in Syphilis".

This paper was discussed by Drs. Wm. S. Ehrlich, Evansville; George W. McCaskey, Fort Wayne; A. W. Brayton, Indianapolis; W. A. Fankboner, Marion, and the discussion was closed by Dr. Hoffman.

Dr. John W. Sluss, Indianapolis, presented a paper on "Infections of the Gall Bladder".

This paper was discussed by Drs. W. D. Asbury, Terre Haute; Wm. H. Foreman, Indianapolis; Geo. W. McCaskey, Fort Wayne; George W. Spohn, Elkhart, and the discussion was closed by Dr. Sluss.

Dr. George W. Spohn, Elkhart, read a paper entitled "The Physical Inequality of School Children".

This paper was discussed by Drs. Ada E. Schweitzer, Indianapolis; George V. Cring, Portland; A. W. Brayton, Indianapolis, and the discussion was closed by Dr. Spohn.

Dr. Charles S. Woods, Indianapolis, presented a paper on "Professional Efficiency in the Hospital".

This contribution was discussed by Drs. H. G. Hamer, Indianapolis; A. C. Kimberlin, Indianapolis; Charles E. Barnett, Fort Wayne.

As this completed the program, on motion duly seconded and carried, the Section on Medicine adjourned at 12:40 *sine die*.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Indianapolis Session, September, 1921

The Section on Ophthalmology and Otolaryngology of the Indiana State Medical Association met in Parlor B of the Claypool Hotel, Indianapolis, Indiana, at two o'clock p. m., on Thursday, September 29, 1921, with the Chairman of the Section, Dr. W. A. Hollis, of Hartford City, presiding.

Dr. Keiper exhibited to the Section a microscopic specimen showing a patch of choroidal atrophy.

Dr. Hollis called Dr. McCaskey to the Chair, and read a paper entitled "Some Professional Shortcomings".

This paper was discussed by Drs. Shanklin, Stucky (of Lexington, Kentucky), Breitenbach, and Adams, and in closing, by Dr. Hollis.

Dr. Hollis resumed the Chair.

Dr. Howard, of Warsaw, read a paper entitled "Report of a Case of Bezold's Mastoiditis, Preceded by Thirty Years of Middle Ear Suppuration".

This paper was discussed by Drs. Lent, Boyd-Snee, Edgar, Santter and Barnhill, and the discussion was closed by Dr. Howard.

Dr. J. A. Stucky, of Lexington, Kentucky, read a paper entitled "Trachoma or Folliculosis Among School Children".

This paper was discussed by Drs. Shanklin, Larkin, Bulson, Keiper, Newcomb, Rariden and Kearby, and the discussion was closed by Dr. Stucky.

There being no further business to come before the Section, on motion duly made, seconded and carried, the Section adjourned until Friday, September 30, 1921, at nine o'clock a. m.

Second Meeting

The second meeting of the Section on Ophthalmology and Otolaryngology was called to order at 9:00 a. m., Friday, September 30th, by the Chairman, Dr. William A. Hollis.

The election of officers for the ensuing year resulted as follows: Chairman, Dr. C. H. McCasky, Indianapolis; Vice-Chairman, Dr. Chas. J. Adams, Kokomo; Secretary, Dr. E. M. Shanklin, Hammond.

Dr. Keiper moved that the Section invite the American Academy of Ophthalmology and Otolaryngology to meet in Indianapolis next year, and that this invitation be extended at the session of the Academy, at Philadelphia, on the 17th of October next. Motion carried.

Dr. Shanklin moved that the Section extend to Dr. J. A. Stucky its thanks for coming here and giving to the Section his estimable paper.

The motion was seconded, and prevailed.

Dr. Kearby read a paper entitled "What the General Practitioner Can Do in Otology".

This paper was discussed by Drs. Spohn, Bulson, Keiper, McCasky, Krebs and Hollis, and the discussion was closed by Dr. Kearby.

Dr. George F. Keiper read a paper entitled "Sand Bar in the Larynx, Report of a Case. Endoscopic Removal."

This paper was discussed by Drs. Layman, Bulson and Knapp, and the discussion was closed by Dr. Keiper.

Dr. Harry Boyd-Snee, of South Bend, read a paper entitled "The Clinical Picture of Streptococcic Osteomyelitis of the Temporal Bone".

This paper was discussed by Drs. Breitenbach, Cuthbert, Bulson, Tomlin and Howard, and the discussion was closed by Dr. Boyd-Snee.

Dr. William F. Molt, of Indianapolis, read a paper entitled "Ludwig's Angina, Complicating Acute Suppuration of the Parotid Gland".

This paper was discussed by Drs. Boyd-Snee and Berry.

There being no further business to come before the Section, on motion duly made, seconded and carried, the Section adjourned, *sine die*.

MONTGOMERY COUNTY

At a special meeting of the Montgomery County Medical Society, held at the Masonic Temple, October 25, a committee consisting of Drs. W. T. Gott, F. A. Dennis and J. R. Etter was appointed to prepare a suitable memorial on the demise of Dr. Samuel L. Ensminger, which occurred September 25, 1921.

Preamble:

Samuel L. Ensminger graduated from the Miami Medical College in 1874 and soon thereafter began the practice of medicine in Crawfordsville, being for a number of years associated with Drs. McClelland and Cowan. He continued to practice in Crawfordsville during the remainder of his active life. He served in the Union army during the Civil War, being severely wounded. He was a member of the Montgomery County Medical Society, having served it as secretary and president, and was a member of the Indiana State Medical Association and the

American Medical Association. He had the confidence and respect of the community in which he practiced for more than forty-seven years.

RESOLVED, By the Montgomery County Medical Society, That in the death of Dr. Samuel L. Ensminger, this Society has lost a valued member, who was always willing to do his duty. Be it further

RESOLVED, That this memorial be spread on the records of the Society, and a copy presented to the family, who have our deepest sympathy.

Special meeting of the Montgomery County Medical Society, October 25, 1921.

On account of the death of Dr. William F. Batman, President of the Society, the vice-president called a special meeting to attend the funeral and take suitable action in the matter. A committee, consisting of Drs. W. T. Gott, E. A. Dennis and J. R. Etter, was appointed to draft a suitable memorial in his behalf.

Preamble:

William F. Batman was graduated from the Jefferson Medical College in 1880, and practiced medicine at Roachdale, Ladoga and Crawfordsville. He joined the Montgomery County Medical Society, March 20, 1900. At the time of his death he was president of the Society. He was a member of the Indiana State Medical Association and the American Medical Association. He was an honored member of the medical profession, and a worthy citizen. His demise occurred October 23, 1921.

RESOLVED, By the Montgomery County Medical Society, That in the death of Dr. Batman we have lost a valuable co-worker, and that a copy of these resolutions be placed on the records of the Society, a copy be presented to the family, who have our deepest sympathy.

MUNCIE ACADEMY OF MEDICINE

September 23, 1921

The Muncie Academy of Medicine met at the Hotel Roberts at 6:15 p. m. on Friday evening, September 23rd, for the regular dinner meeting. The business routine was waived and Dr. Irving Potter, of Buffalo, the guest of the Academy and the speaker of the evening, was introduced by President B. R. Kirklin. Dr. Potter's subject was "Version" and the address was illustrated by lantern slides.

Synopsis:—In 1130 cases of version the mortality has been 2.3 percent. The mortality in version is no higher than in any other method of delivery. There should be no morbidity in versions. In version the woman has the first stage of labor only; there is no second stage to the delivery. Following delivery by version the patient is put on her stomach in the second 24 hours. On the 8th day she is placed in the knee-chest position for ten minutes. On the 10th day she gets up and on the 13th day goes home. Sometimes patients go home on the 12th day. There is less lochia and no ballooning of the uterus. Some people have said that the mother cannot nurse the baby because there is no second stage of delivery. I wish to say that version has no effect on the milk.

The baby is weighed at birth and every day until it leaves the hospital. We find that they get the birth weight back quicker than other babies and they leave the hospital on the 13th day with a considerable increase of the birth weight. As to injury to the child, in doing 4000 versions I have broken one arm in a live baby. This case was one of a big baby and a small pelvis. I have twice broken the arms of dead babies in the interest of the mother and when I knew the baby was dead. There are fewer lacerations with properly performed version than any other method. I do no episiotomies. At the present time I do not believe that labor should be induced. No cystocele and no rectocele follows version.

DISCUSSION

DR. O. G. PFAFF, Indianapolis, Indiana—From the standpoint of most of us, version is a revolutionary proceeding just as ovariectomy was in McDowell's time. One New York man has said that he did not believe version could be taught in medical colleges; that it was Dr. Potter's own skill and ingenuity that made it a success in his hands and that we could not teach anybody else to do it. In answer to this Dr. Potter said, "I will guarantee to teach anybody to do these things as well as I do." Not all medical students are skilled in major surgery and not all are skilled in obstetrics. Obstetrics is beginning to be a real specialty. The man who desires to become a specialist in obstetrics must equip himself to become a specialist. I would like to ask Dr. Potter if he can prove that there is no traumatism by ironing out the birth canal. If so I can see no objection to adopting Dr. Potter's version by the obstetrical specialist.

DR. A. M. MENDENHALL, Indianapolis, Indiana—I believe that version should be discussed from the standpoint of technique and indication. We have been taught in the past certain indications for version, among them face presentation, prolapsed cord, transverse presentation, occiput posterior presentation, eclampsia, etc. Such unusual indications are serious conditions. Dr. Potter has proven the right to a separate consideration of version. In most instances it has been done as a last resort. The indication back of version is the real consideration. Personally I feel that version should be a substitute for high forceps. High forceps is the most unsurgical of all surgical procedures. Dr. Potter anticipates trouble by going ahead with version. His method is distinct. The scapula should be well out before delivery of the arm. Dr. Potter goes contrary to all textbooks in regard to speed. His time is longer. The baby does not die in 8 minutes. The second stage is painless; there is no laceration, less necrosis, less shock to the mother and less injury to the baby. It has been shown at autopsy that 50 percent of still born babies die of head injury in spontaneous delivery. There are no third degree lacerations in delivery by version. It might be of interest to you to know that the fetal mortality for the year ending the first week of March, 1920, in Indianapolis was 3.6 percent; in Indiana, 3.8 percent; in Muncie, 6 percent; Dr. Potter, 2.3 percent.

DR. CHARLES MARVEL, Richmond, Indiana—For the last two or three years I have applied version to all malpositions in my work. In my mind it is a question as to whether all men should do version or not. I believe that version is for the man who is sure of his technique. Are all cases of obstetrics version? I believe that if version is done properly it is as safe as a normal delivery.

DR. M. C. SEXTON, Rushville, Indiana—Some time ago I had the pleasure of being in Buffalo and seeing Dr. Potter do some work. There were four cases, the first a woman of 28 years, second baby; the os was completely dilated; Dr. Potter after making the preliminary steps of his version said that the case could not be delivered by version as the os could not be dilated sufficiently; vigorous six and one-half pound baby was delivered by high forceps. Second case, primipara, age 37, delivery in 14 minutes. Third case was breech presentation; worked on baby after delivery about 30 minutes with intra-tracheal tube. Fourth case was right occipito posterior. Baby born dead before Dr. Potter reached the patient.

DR. H. F. BECKMAN, Indianapolis, Indiana—I am sure we are all impressed with Dr. Potter's analysis of his method and that we are all under great obligations for his coming before us and giving us what

he has. Unfortunately the human mind is more intent upon taking up and grasping the dramatic than on grasping detail and painstaking small points. They are impressed with version but not so much impressed with what occurs before and following version. I would not advise version indiscriminately. The rigid asepsis and painstaking care under which version is done are points which should impress us rather than the point of version itself. This care and preparation which Dr. Potter has are not the result of version but of acumen and of keenness in detail.

DR. JANE KETCHAM, Indianapolis, Indiana—Some time ago I had a chance to try Dr. Potter's method. Patient was a negress weighing 250 pounds. She had been in labor a long time; this was the 16th pregnancy; she had a complete ventral hernia. Version such as Dr. Potter described was done. I think that version is a very good method of delivering a breach; it is easier than other methods. Surgical asepsis is very important. If there is not time to wait for complete dilatation of the cervix there will be trouble.

DR. C. J. ROTHSCHILD, Fort Wayne, Indiana—I would like to ask what Dr. Potter's method is in delivering twins.

DR. H. D. FAIR, Muncie, Indiana—Would like to ask if Dr. Potter makes a vaginal examination.

DR. H. A. DUEMLING, Fort Wayne, Indiana—I think it is well to consider the surgical aspect of obstetrics. It is of interest to surgeons to know what is going on in obstetrical work. Dr. Potter practices absolute cleanliness. Cleanliness plays an important role in mortality in obstetrics and in all other conditions we are called upon to treat.

DR. E. F. KISER, Indianapolis, Indiana—Shall we teach Dr. Potter's method in the medical schools? I cannot believe that this method has a place in the medical school.

DR. A. L. KANE, Fort Wayne, Indiana—Version has been taught in complicated cases as a matter of necessity. If all medical schools could be taught this it would be a valuable addition to the curriculum. Since version is a method of doing obstetrics I believe that this method should be taught in the medical schools.

DR. MILES F. PORTER, Fort Wayne, Indiana—I think it is only fair to call your attention once more to caution. Do not be stampeded by statistics. I still believe that chloroform is not the best anesthetic in obstetrics or any other branch of surgery. I cannot altogether accept that version is the ideal method for obstetrics in general practice. With all due respect to Dr. Potter, I must confess I am still "from Missouri" and considerable of a "doubting Thomas".

DR. L. P. DRAYER, Fort Wayne, Indiana—I wish to support Dr. Miles F. Porter's objection to chloroform. I do not advocate the use of chloroform in obstetrics or any other surgical procedure.

DR. WOOLERY, Bloomington, Indiana—I believe Dr. Potter has made a success of version because he has developed it to an art; it is his hobby. He does it with quietness, ease and skill because it has become an art with him.

DR. POTTER'S closing discussion:—I agree with Dr. Mendenhall that high forceps are things of the past. No one here can say how much trouble he has gotten away from by doing elective version. The method is increasing in popularity with the women. They consider favorably the elimination of the second stage and I think that after all it is the women that have the babies and a woman should have her choice of obstetrics. When I hear of a second stage lasting 24, 36, or 38 hours, it makes me sick. I can demonstrate this thing. I have given some men some ideas that they have carried away and developed. Any man with anything above the ears, any judgment

or obstetric training can school himself to do this work. I hope the time will never come when I cannot choose my method of delivering women. I must judge with the individual against the use of forceps. Another thing, a breach case is not a version. You cannot flex the head in a breach case. In version you have flexion and maintain it. If you lose it you are lost. The preparation is a very important thing. Preparation for anything is important. We do not have any post-partum infections. The temperature very rarely goes above 99.5 or 100 on our charts. I never want to see consultation cases. You are called in when an arm is hanging out and you are expected to carry the load of responsibility. Some people think you cannot do version in a primipara. It is as easy to do version in a primipara as in the majority of other cases. In delivering twins I try to lift the lower one up and get the anterior one. I am always very careful not to lock twins. This means death. I have delivered women by version without opening up the old scar. I make all vaginal examinations. I give no antepartum enemas. I do not care what you think about chloroform. Everyone is entitled to his own opinion as to anesthetics. I have one man who gives all my anesthetics. If you cannot have an anesthetist bring someone with you who can give the anesthetic. No man has any business to be an anesthetist, obstetrician and night watchman at one time. My anesthetist has given 3500 chloroform anesthetics with no trouble. I like chloroform because it is pleasant to take, quick in action and gives the most profound relaxation: the patient returns to consciousness very quickly. The general practitioner can do version.

Attendance 287.

Adjournment.

October 24, 1921

The weekly dinner meeting of the Muncie Academy was held at the Roberts Hotel at 6:15 p. m. October 24, 1921. The meeting was called to order by President Dr. B. R. Kirblin.

Dr. I. N. Trent announced the program of activity for the coming Cancer Prevention Week. All doctors of the Academy have signified their willingness to help carry out the program and a doctor has been appointed to speak at each church in the city on Sunday morning on the subject of Cancer Prevention.

Dr. Hollis, of Hartford City, outlined the plans for the program for Cancer Prevention Week to be carried out in Hartford City.

Dr. Moore, as chairman of the Program Committee, gave the program for future meetings as follows: November 4th, joint meeting of the Muncie Academy of Medicine and Delaware-Blackford Medical Society with program on the subject of Control of Cancer; November 11th, program by internes of the Long Hospital, Indianapolis; November 18th, Dr. A. C. Kimberlin, of Indianapolis, "The Psychic Control of Cardio Vascular Patients."

The address of the evening was given by Dr. Martin Fischer, of Cincinnati, his subject being "Arterio-Sclerosis".

Synopsis:—In considering the subject of arterio-sclerosis, we should go over the evidence of the last thirty or forty years and see if there is not a better and more hopeful way of treating arterio-sclerosis. Arterio-sclerosis is a name which I wish to simplify by the term "vascular disease". Arterio-sclerosis means a thickening of the arteries. Two things greatly determine the diagnosis of arterio-sclerosis. One is the anatomic thickening of the arteries and veins. The other thing is increased blood pressure. To the two signs and symptoms which are characteristic of vascular disease another may be added, but it is not a part of the disease but a consequence. This symptom is cardiac hypertrophy. One cause for

the lessening of elasticity of the vessels may be due to spasm. The less elasticity the narrower the artery. As a consequence there is an increased amount of work for the heart and the extra work results in hypertrophy of the heart. But hypertrophy of the heart in itself is not a bad thing. I believe that prominent among the causes of vascular disease are hard work and worry. Alcoholism used to be another cause. Some of these things are bad, but I do not think any one of them ever gave vascular disease to anybody. The lesions of vascular disease are always spotty, even in the advanced stage. High blood pressure and vascular disease are due to infection. It has been found that when rabbits are fed a diet of adrenal gland and spleen they develop a high blood pressure which can be maintained for months and months. These animals do not develop vascular lesions. Hypertrophy of the heart as a cause of vascular disease is plain bunk. It is only a sign and a consequence of vascular disease in the blood vessels. The treatment depends on which branch is affected and on the origin in which the lesions occur. Vascular disease is not a disease of the large but of the small blood vessels or capillaries. Depending on where we get these lesions we have anemia of that part, and if there is no possibility of re-establishing the blood supply of the part, the part dies. The most significant lesions are those of the brain and kidney. The insane are for the most part products of slow going vascular disease of the brain. Glaucoma is nothing but edema of the eye ball due to deficient arterial blood supply to the eye. When vascular disease affects the kidney we have a small red kidney which looks healthy but you will find small spots of gray which are characteristic of vascular disease.

We have been taught in text books that vascular disease goes with a normal or increased water output. The amount of albumin and casts are significant of kidney disease. When an arterio-sclerosis patient comes to you with a normal water output, put it down he has a good kidney. If there are casts and albumin he has a little spot in the kidney. A practical point is that you only need one-half of one kidney to have a normal water output. We have animals that have lived years and years with only one-half of one kidney. Bright's disease is arterio-sclerotic change in the kidney. Bright's original book is the best article I have ever read on the subject. He recognized that the first cause of kidney disease was arterio-sclerotic change. Arterio-sclerosis is due to infection. I do not advocate the use of too much adrenalin in local anesthetics. I believe that bleeding is the thing to do in some cases.

The discussion was led by Dr. Ritchey of the Long Hospital, Indianapolis. Others taking part in the discussion were Drs. Beall, of Fort Wayne; Spurgeon, of Muncie; Marvel, of Richmond; Krebs, of Huntington; Good, of Huntington, and Sellers, of Hartford City.

Attendance 208.

Adjournment.

R. A. BEESON, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ACNE COMBINED VACCINE-LEDERLE.—A suspension of killed acne bacilli and killed *Staphylococcus albus* and *Staphylococcus aureus*. For a discussion of Mixed Bacterial Vaccines, see New and Nonofficial Remedies 1921, p. 314. Acne Combined Vaccine-Lederle is marketed in various size packages containing graduated doses of the vaccine. Lederle Antitoxin Laboratories, New York.—(*Jour. A. M. A.*, Oct. 1, 1921, p. 1103).

PROTOLAC.—A brand of calcium caseinate-N. N. R. For a description of the composition, actions and uses, and dosage, see *Jour. A. M. A.*, Sept. 24, 1921, p. 1023. Dry Milk Co., New York.

BENZYL SUCCINATE-SEYDEL.—A brand of beuzyl succinate-N. N. R. For a description of the properties, actions and uses, and dosage, see *Jour. A. M. A.*, Sept. 24, 1921, p. 1023. Seydel Manufacturing Co., Jersey City, N. J.—(*Jour. A. M. A.*, Oct. 8, 1921, p. 1183).

COPPER CITRATE-P. W. R.—A brand of copper citrate-N. N. R. For a discussion of the actions, uses and dosage of copper citrate, see *New and Nonofficial Remedies 1921*, p. 88. Powers-Weightman-Rosengarten Co., Philadelphia.

MERCURY BENZOATE-P. W. R.—A brand of mercuric benzoate-N. N. R. For a discussion of the actions, uses and dosage of mercuric benzoate, see *New and Nonofficial Remedies 1921*, p. 192. Powers-Weightman-Rosengarten Co., Philadelphia.

MERCURY CYANIDE-P. W. R.—A brand of mercuric cyanide-N. N. R. For a discussion of the actions, uses and dosage of mercuric cyanide, see *New and Nonofficial Remedies 1921*, p. 183. Powers-Weightman-Rosengarten Co., Philadelphia.

MERCURY SUCCINIMIDE-P. W. R.—A brand of mercuric succinimide-N. N. R. For a discussion of the actions, uses and dosage of mercuric succinimide see *New and Nonofficial Remedies 1921*, p. 196. Powers-Weightman-Rosengarten Co., Philadelphia.

SILVER CITRATE-P. W. R.—A brand of silver citrate-N. N. R. For a discussion of the actions, uses and dosage of silver citrate, see *New and Nonofficial Remedies 1921*, p. 333. Powers-Weightman-Rosengarten Co., Philadelphia.

SILVER LACTATE-P. W. R.—A brand of silver lactate-N. N. R. For a discussion of the actions, uses and dosage of silver lactate, see *New and Nonofficial Remedies 1921*, p. 334. Powers-Weightman-Rosengarten Co., Philadelphia.

PROCAINE-ADRENALIN HYPDERMIC TABLETS No. 2.—Each contains procaine-Abbott (see *New and Nonofficial Remedies 1921*, p. 34) 0.02 gm. (1-3 grain), adrenalin 0.00004 gm. (1-1500 grain) and sodium chloride, sufficient so that when the tablet is dissolved in 1 Cc. of water the resulting solution is isotonic. The Abbott Laboratories, Chicago.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1423).

PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the therapeutic claims advanced for them were held to be false: Joyner's Gui-A-Col Compound (William-Ellis Drug Co.), consisting essentially of guaiacol, an iodid, sugar, alcohol, and water, and falsely labeled as a remedy for consumption, whooping cough, and all affections of the throat, chest and lungs. Egyptian Regulator Tea (Kells Co.), consisting essentially of senna, coriander, dog grass, ginger, taraxacum, sambucus, licorice and cinnamon, and claimed to be a speedy relief for dyspepsia, liver complaint, headache and nervousness. Nervosex Tablets (United Laboratories Co.), consisting essentially of strychnine, phosphates, and iron, zinc and calcium salts, and claimed to be a nerve and muscle stimulant. Falsely labeled a compound of nerve and muscle stimulants for low vitality, lack of energy and sexual weakness. Castalian Natural Mineral Water (J. P. Forbes & Co.), recommended for rheumatism, Bright's disease,

dyspepsia, diphtheria and other conditions. Man's Capsules (Man's Capsule Co.), consisting essentially of cubebs and copaiba and sold as a remedy for gonorrhea and gleet.—(*Jour. A. M. A.*, Oct. 1, 1921, p. 1119).

PATENT MEDICINES IN ENGLAND.—Broadly speaking, the ethical standards of the "patent medicine" industry in Great Britain in 1921 is that which obtained in the American "patent medicine" industry prior to the passage of the Food and Drugs Act in 1907. As long ago as 1912 the British Parliament created a Select Committee on "Patent Medicines". The Committee published a report in 1914. The coming of the World War favored the nostrum interests and no legislative action was taken until 1920, when a Proprietary Medicine Bill was introduced into the House of Lords. Now comes the Medical Press and Circular (London) complaining that the bill has been pigeonholed. This publication points out that in 1920 the British government received revenue from the sale of "patent medicines" totaling 1,332,661 pounds, and that the very fact that a government hard up for revenue should be able to obtain so vast a sum from a business so largely tinctured with fraud and such a menace to the public health may be "a sufficient reason" in explanation of the British government's attitude of "innocuous desuetude" toward this bill.—(*Jour. A. M. A.*, Oct. 1, 1921, p. 1107).

TOXICIDE NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Toxicide (Toxicide Laboratories, Chicago) is alleged to be a remedy which "increases systemic resistance * * * used for immunizing against septic infections * * * is indicated in any case of septic infection, capable of inducing inflammation and pus formation, regardless of location or kind of tissue involved". The manufacturer informed the Council that "Toxicide contains Lachesis 12x, Tarantula 6x, Psorinum (special) 15x, Silica 6x and Excipient q. s. (the excipient is sweet milk) * * * These remedies are combined in the sweet milk and put through a process of development, which produces the curative agent which we call 'Toxicide'." No information was given as to the proportions, either relative or actual, of the ingredients nor was any information given as to the "process of development" to which the mixture is subjected. Neither was any evidence submitted to the Council for the highly improbable claims of curative effect which are made for Toxicide. The Council declared Toxicide inadmissible to *New and Nonofficial Remedies* because: (1) The identity and amount of the potent constituent or constituents have not been furnished; (2) the preparation is advertised indirectly to the public; (3) the name "Toxicide" is therapeutically suggestive, and (4) the therapeutic claims, being unsubstantiated by evidence, are unwarranted.—(*Jour. A. M. A.*, Oct. 8, 1921, p. 1197).

TIRED RABBITS FOR DIABETES AND RING-TAILED MONKEYS FOR SEX STIMULATION.—In March, 1919, an article by T. Webster Edgar appeared in the *New York Medical Journal* in which Edgar stated that he had treated successfully twenty cases of definite diabetes with intramuscular injections of his diabetic serum. No information was given regarding the serum except that it was prepared from normal blood after the animal is exercised to the point of fatigue. Subsequently newspaper articles appeared in which Edgar is quoted as using the blood of rabbits first placed on a treadmill to produce fatigue. In November, 1920, an article by Edgar appeared in the *New York Medical Journal* on "Sterility, Sex Stimulation and Endocrines" in which he stated that he was interested

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(Continued from page 404)

in sex stimulation and that he had a serum which he was using with success in this condition. During the last year newspapers have carried sporadic reports of alleged remarkable results produced by Dr. Thomas Webster Edgar of New York through the transplantation of "interstitial gland" taken from "a special species of orangoutang". In a letter to a layman Edgar stated that the treatment was successful and that he was now treating all cases by this method, and that the fee for the operation was five hundred dollars inclusive of the sanitarium. Commencing Sunday, Oct. 1, 1921, a series of sensational articles appeared regarding one of Edgar's alleged monkey-gland implantations. The material is played up in the style typical of yellow journalism. The statement that appeared in these articles to the effect that Edgar "is a member of the County Medical Society of New York" is incorrect. Edgar is not a member. The newspaper claim that Edgar is "an authority on glandular transplantation" should be accepted with reservations.—(*Jour. A. M. A.*, Oct. 15, 1921, p. 1272).

PIL MIXED TREATMENT (CHICHESTER).—This is a proprietary preparation of the Hillside Chemical Co., Newburgh, N. Y., sold in the form of pills, each said to contain 1-20 grain of mercuric iodid and 5 grains potassium iodid. The Council on Pharmacy and Chemistry reports that in 1907 the therapeutic claims advanced for the preparation were examined and found to be unwarranted, exaggerated and misleading. Misleading statements were also made for the product itself. The Council holds that the use of Pil Mixed Treatment (Chichester) is on a par with the use of certain blood purifiers which were advocated at a time when the treatment of syphilis was a baffling problem. It reports that the present day advertising, which reads as if it had been written in the heyday of proprietary license, is, in effect, an invitation to treat syphilis in its various stages and manifestations with Pil Mixed Treatment (Chichester). If heeded by those who read the advertising, it will result in much harm to the public and the profession. For this reason the present report of the Council is published as a protest against any advertising propaganda advocating the routine treatment of a disease which requires that each case be studied carefully so that prompt and efficient measures may be applied to the various manifestations of the disease.—(*Jour. A. M. A.*, Oct. 22, 1921, p. 1355).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the therapeutic claims advanced for them were held to be false: Euca-Mul (Edward G. Binz Co.), consisting essentially of oil of eucalyptus, sugars, glycerin, gum, water and alcohol, and claimed to relieve bronchial asthma, and to be effective in coughs of phthisis and whooping cough. Kalina Tablets (J. M. Rutkowski and Kalina Co.), consisting essentially of plant extractives, including cascara, aloes, pepper and strychnin, and sold as a health restorer, blood purifier, etc. Howell's Lymphine Tablets (Chas. H. Howell & Co.), pills consisting essentially of ferrous carbonate, nux vomica, aloes and phosphorus, and claimed to relieve all forms of weakness, etc. Wampole's Phosphorus, Nux and Damiana (Henry S. Wampole Co., Baltimore), consisting of the three drugs named, and recommended for impotence, insomnia, hysteria and diseases of the brain of both sexes.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1438).

CONVERSE TREATMENT FOR EPILEPSY.—An examination of this preparation in the A. M. A. Chemical Laboratory in 1916 showed that essentially each 100

Cc. of the preparation contained about 7.3 gm. ammonium bromid, 5 gm. calcium bromid and 8.7 gm. potassium bromid. Calculating from the bromid determination, each dose of one teaspoonful (1 fluidrachm) contains the equivalent of 14.5 grains of potassium bromide or each daily dose (4 teaspoonfuls) corresponds to 58 grains potassium bromid.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1440).

MICAJAH'S UTERINE WAFERS.—Micajah's Medicated Wafers (formerly called Micajah's Medicated Uterine Wafers) were analyzed in the A. M. A. Chemical Laboratory in 1910, and found to consist essentially of dried "burnt" alum, boric acid and borax. In 1919 the Council on Pharmacy and Chemistry in reporting on this product showed that whatever virtues might be possessed by the proprietary are those inherent in such well known astringents as alum, boric acid and borax. Micajah's Medicated Wafers are an excellent example of mischievous proprietary medicines. Physicians who use this will be likely to overlook or pass over new growths, specific infections and diseases that require radical remedial measures.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1441).

SAL HEPATICA.—Little information is given, or apparently ever has been given, by the proprietors (The Bristol-Myers Co.), in regard to the composition of Sal Hepatica. Some years ago medical journal advertisements contained the statement that it contained all the "Tonic, Alterative and Laxative Salts of the celebrated 'Bitter Waters' of Europe * * * fortified by the addition of Lithium and Sodium Phosphates". It has also been claimed that Sal Hepatica is "a saline combination with the addition of Sodium Phosphate and Lithia Citrate".

The label of a recently purchased specimen contained the declaration, "Sal Hepatica is an effervescent saline combination possessing medicinal properties similar to the natural 'Bitter Waters' of Europe, and fortified by the addition of Sodium Phosphate". In view of these indefinite statements the A. M. A. Chemical Laboratory made an analysis of the product. The analysis showed it to have the following composition: Sodium phosphate anhydrous 4.4 percent, sodium sulphate anhydrous 26.5 percent, sodium tartrate anhydrous 12.7 percent, sodium bicarbonate 19.5 percent, tartaric acid (free) 20.8 percent, sodium chloride 8.9 percent, lithium phosphate trace, water of hydration (by difference) 7.2 percent. Sal Hepatica, therefore, is essentially an effervescent mixture of dried sodium sulphate and sodium tartrate with a little dried sodium phosphate and table salt added. Sal Hepatica, then, is a simple effervescent saline laxative. It is essentially secret in composition and is sold under claims that would be laughed at were the full formula of the product a matter of public knowledge.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1438).

A certain little girl, convalescing from a childish ailment, wanted something to eat, and as is usual with little people, wanted it at once, she demanded it again in an imperative voice.

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Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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TREATMENT

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By CHARLES D. AARON, Sc.D., M.D., Professor of Gastro-enterology and Dietetics in the Detroit College of Medicine and Surgery; Consulting Gastro-enterologist to Harper Hospital. Octavo, 904 Pages, with 164 Engravings, 48 Roentgenograms and 13 Colored Plates. Cloth, \$10.00 net.

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ORIGINAL ARTICLES

ULCER OF THE STOMACH AND DUODENUM

ETIOLOGY AND PATHOLOGY*

B. W. RHAMY, M.D.

FORT WAYNE, INDIANA

Simple ulcer of the stomach was first described by Cruveillier in 1830 and his description serves admirably today.

Ulcers are usually solitary, may occur in any portion of the stomach, but are usually found at the points subjected to the greatest irritation; namely, in the lesser curvature, in the posterior wall, and near the pylorus. Ulcers may be round, oval or irregular and vary in size from a pin head to a pancake. They may have a superficial saucer shape, be a deep irregular funnel, or a clean punched out hole. Occasionally one is found with the large end of the funnel toward the peritoneum. The edges in acute ulcer are soft but in the chronic type are indurated as the result of inflammatory and scar tissue. The mucous membrane around them may be reddened from inflammation while the rest of the stomach shows a chronic catarrhal inflammation. The exposed surface of the ulcer is usually a grayish brown from changed blood and the replacement fibrosis brought about by the constant tendency of the ulcer to heal. Commencing in the mucous membrane, ulcers gradually extend through the coats of the stomach and in this process blood vessels are eroded, causing more or less severe hemorrhages.

Finally, the peritoneal coat may be perforated, causing peritonitis. Nature attempts to block this process through localized peritonitis which forms protective adhesions, tending to plug up any perforations with some contiguous abdominal structure, usually the pancreas or liver. This contiguous structure then becomes the base of the ulcer; and in turn, may be penetrated by the ulcerative process, producing ab-

scess, inflammation and fistulae. Instances have occurred where the bowel, being the structure plastered to the ulcer, has been perforated, forming a natural gastro-enterostomy. According to Brinton, adhesions to adjacent abdominal organs occurs in about 40 percent of cases, and perforations in about 13 percent. Over half of all ulcers heal spontaneously, forming dense scar tissue, which is not only apt to be the seat of new ulceration, but to produce marked deformity in the form of pyloric obstruction, or hour glass stomach, depending on the location. In such recurring ulcers the tendency to hemorrhage and perforation is greater than in the primary ulcer.

Statistics give the site of peptic ulcers about as follows: In the lesser curvature about 30 percent, the posterior wall 38 percent, at the pylorus 16 percent, in the anterior wall 6 percent, at the cardia 4 percent, the fundus 3 percent and in the greater curvature 3 percent. As to the frequency, between 4 and 5 percent of all postmortems show healed or unhealed peptic ulcers, of which about 80 percent are solitary and about 20 percent multiple. Howard analyzed the statistics of 161,599 patients treated in American hospitals and found 930 instances or .57 percent in which ulcer was present. Statistics from European hospitals give about 1.3 percent. Duodenal or juxtapyloric ulcers, *i. e.*, those occurring within 1½ inches of the pylorus or above the opening of the common duct, must be considered as peptic ulcers, since they are bathed by unchanged acid chyme before it is neutralized by the alkaline secretions in the duodenum. Peptic ulcers are found beyond the pylorus at least twice as frequently as in the stomach. The Mayo Clinic in 2,500 cases operated, found duodenal ulcers 73 percent to stomach ulcers 23 percent. Males are more susceptible than females in about the proportion of 4 to 1. The ulcer age is between 17 and 40 years, although ulcers of the acute type have been found in children, even in very young babes, Gargot reporting one in a babe 30 hours after birth. Cackovic in 172 operative cases found 2.32 percent who were under the age of 10 years.

*One of the papers of a symposium presented before the Indiana State Medical Association, Indianapolis Session, September, 1921.

Etiology. Obviously the normal gastric mucosa is naturally resistant to normal gastric juice, indeed it may be accepted as true that almost any *living* tissue possesses the power of resisting digestion, probably by means of antiferments, and that this power is most in evidence in the gastric mucosa. The essential pre-ulcer change, therefore, must be one that either renders a localized area of mucosa abnormally susceptible to the action of acid gastric juice, or one that causes necrosis and sloughing independent of any action of the gastric juice. Among the most important possible etiologic factors about which theories have been built are: the effect of long continued trauma from coarse foods, coupled with the action of acid gastric juice, impaired blood supply, impaired nerve supply, and bacterial infection.

Vascular Factors. In favor of the vascular origin has been mentioned the localized punched out character of ulcers as indicating either a localized thrombosis or an endarteritis obliterans with necrosis and digestion of the resulting infarct. Ulcers as the result of thrombosis have been produced experimentally in animals by the injection of chemicals into the small blood vessels of the stomach. On the other hand, it has been pointed out that in youth, where ulcers have formed as the result of infection and embolism, they were of the acute type and healed readily. Microscopic examination of the blood vessels immediately adjacent to an ulcer frequently shows occlusion by thrombosis and endarteritis, but again, as these pathologic changes are always found in an ulcerative process, they must be regarded as most apt to be of the secondary variety, *i. e.*, protective thrombi, etc. Reeves, *Surg. Gyn. and Obst.* Apr. 1920, found that in the area of predilection for ulcer formation, *i. e.*, on both sides of the pylorus, the blood supply is not as free as in other parts of the stomach, as the arteries are fewer in number, smaller, longer and make fewer anastomoses. He advanced the idea that these circumstances make an occlusion of one of these vessels a more important factor in the production of ulcer than if there were free anastomosis.

Nervous Factors. Ulcer of the stomach has been induced experimentally through interference with the nerve supply, by section of either the vagus, sympathetic, or the spinal cord. As ulcer is associated with spasms of parts of the stomach, it has been argued that this nerve section caused localized anemia, by spasm of smooth muscle compressing the arteries of the mucosa. Reflex irritation of the nerves of the stomach from appendicitis or other abdominal diseases has also been advanced as a possible cause of ulcer. Hurst believes that the association of chronic appendicitis with gastric and

duodenal ulcer is too common to be a coincidence; and that the greatly diminished tendency to relapse, especially of acute ulcers, following removal of the appendix, but without interference with the ulcer, proves the appendix to be the primary condition. He is also convinced that excessive smoking, through its effect on the autonomic nervous system, by increasing hyper-tonus and inducing hypersecretion, promotes ulceration. It is, however, a mooted question as to whether appendicitis might cause ulcer by reflex nerve irritation, or as a primary focus of infection.

Hurst is convinced that "it is a peculiar type of stomach or duodenum that develops ulcer, since the primary causes of irritation do not commonly affect the normal stomach". It seems possible that just as one type of individual may have epilepsy and another migraine, so still another type may be subject to peptic ulcer. Wolff, in *Hygea-Stockholm* Aug. 21, 1920, refers the symptoms of peptic ulcer, *i. e.*, pains, gastro-spasm, hypersecretion and contraction of the mucous membrane and its blood vessels, as a manifestation of overactivity of the vagus nervous system, and suggested the use of atropin. Von Arnstel has reported 50 cases in which .5 to 1 mg. of atropin sulphate was given daily for 10 weeks with marked diminution of the symptoms. Moynihan noted in his patients that attacks were more frequent and prolonged in winter and were brought on by dietary indiscretions, overwork, worry and exposure, all of which might act through the nerves or by lowering the general resistance.

Trauma. In considering the effects of trauma from foods, etc., it may be said that ulcer is extremely rare compared with the frequency of the exciting causes, which argues that injury is unlikely unless the vitality of the mucosa is already lowered by some means. The following points stand out in reference to trauma: Ulcers are prone to appear in the lower end of the stomach, which is the most active part, longest in contact with the acid chyme and longest subjected to irritation of partly digested and irritating foods, such as alcohol, vinegar, fruit acids, mustard, peppers, seeds, skins and fibres of nuts, fruits and vegetables passing into the duodenum. Abrasions, erosions or acute ulcers may form in consequence, and these same factors of irritation would tend to prevent healing, making chronicity possible. Bacterial infection of such damaged tissue probably always occurs and this in turn would cause congestion and edema, further factors favorable to devitalization. Such devitalized infected tissue would afford little resistance to digestion. Barclay and Hurst, *Brit. Med. Jour.* Apr. 24, 1920, in experiments on animals, found that an exposed acute ulcer would heal in from 12 to 20 days,

but by rubbing them daily with coarse foods such as might go into the stomach, they prolonged the healing to from 30 to 52 days in 11 cases so treated.

Of interest in discussing the possibility of trauma in the etiology of peptic ulcer is the discussion by Terry, *Jour. A. M. A.* July 24, 1920, on ulcers of the jejunum following gastro-enterostomy in which the primary cause is ascribed to trauma by instruments, non-absorbable sutures and buttons, the tissue thus traumatized being digested by the acid chyme. Improper food and insufficient mastication are common faults and may early in life begin to pervert the functions of digestion and set up chronic gastritis with stasis of the lymphatics. It is possible that this early abuse of physiologic function may lay the foundation for ulcerative processes.

Barclay and Hurst found that the stomach in duodenal ulcer was hypertonic, *i. e.*, hanging high up and consequently emptied rapidly, so that the first part of the duodenum was constantly in contact with exceptionally acid juice. In gastric ulcer, the stomach was hypotonic, *i. e.*, lying low, and in consequence emptied slowly, the acid chyme remaining long in the stomach and only a little at a time going into the duodenum.

Hyperchlorhydria in Ulcer. The conception of hyperchlorhydria as the primary etiologic factor of peptic ulcer has long been prevalent. Moynihan at one time promulgated the rule that chronic hyperacidity was in practically all cases a definite indication of ulcer. Recently much experimental laboratory and clinical evidence has been offered to disprove this principle, the most radical being that hyperacidity was either a complicating incident or was secondary and due to reflex irritation from the ulcer or its products. That there is a relationship between hyperacidity and ulcer is shown first by the fact that hyperacidity is the rule in peptic ulcer, and second by the fact that the majority of round ulcers occur in areas most exposed to acid secretions, namely, on either side of the pylorus.

Although hypo-acidity has been found in ulcer and conversely hyperacidity in non-ulcer cases, from my own observation I would suggest that many of the cases showing hypo or anacidity probably had a hyperacidity in the pre-ulcer period. In practically all cases of ulcer coming under my observation, hyperacidity was a prominent symptom, and when hypo or anacidity was present, history of previous hyperacidity could be elicited. The pathologic changes as I see them are these: first a chronic hyperacidity during the formative stage of the ulcer. In the course of years of a continuous or recurrent ulcerative process, the continued

irritation, indurative inflammatory processes, etc., with the accompanying gastritis, may gradually bring about a loss of gastric function characterized principally by reduction in the acid content of the gastric juice. This stage of hypo or anacidity I consider to be a pre-cancer stage during which the ulcerative process is very apt to be transformed into a malignancy.

Smithies, *Jour. A. M. A.*, June 5, 1921, says experimental introduction of high acid values, even as much as ten times the normal amount, failed to damage the normal mucosa, and quotes Carlson "that introduction of acid in cases of ulcer does not produce clinical discomfort". As to the value of this observation I have serious doubts, first because a few introductions of acid cannot be compared to the insidious effect of the long continued and constant irritation of hyper acid gastric juice, and second in my own experience it has been an observation common to all ulcer cases that they avoided acid foods on account of discomfort. In Smithies's records of 2,168 proved ulcers, 33.4 percent had hyperacidity, 41 percent normal acidity, 23 percent subacidity and 2.6 percent anacidity. Eggleston, however, *Jour. A. M. A.*, Dec. 4, 1920, in 500 cases found 73 percent having hyperacidity, 14 percent normal acidity, 11 percent hypo-acidity and 2 percent anacidity, while Gongolez, *Siglo Medica Madrid*, May 1, 1920, in 715 positive cases of ulcer noted 96.2 percent with hyperacidity. He claimed that the treatment which cures ulcer also cures hyperacidity, and that this is a further argument in favor of the association of hyperacidity and ulcer. From these figures it can be safely concluded that at least the majority have hyperacidity. The fact that in perforated ulcers plastered up by some adjacent organ like the liver, the ulcerative process may extend into this adjacent tissue, is in my mind proof conclusive that the eroding action is digestive in character.

Cellular Toxins. Brief mention may be made of the theory of cellular toxins. Turck has stated (see Lewishon, *Jour. A. M. A.*, Aug. 6, 1921) that by causing tissue breakdown in animals, tissue toxins were liberated, causing the development of ulcers in 36 cases. This he thinks was brought about when the animal, losing its protective power against its own tissue toxins, a stasis in the blood vessels of the mucosa occurred. Jona, *Med. Jour. of Australia*, March 2, 1918, prepared extracts of burnt tissues using liver, placenta, spleen and muscle tissue and injected these extracts into animals. He concluded that these injections caused inhibition of gastro-intestinal secretions, and believed this to be a potent factor in the causation of duodenal ulcers after burns.

Theory of Bacterial Infection. The infectious origin of ulcer has had advocates for many

years. Experimentally ulcer has been produced by intravenous injections of pus, of bac. pyocyaneus, bac. dysentery, bac. coli, lactic acid bacillus, pneumococcus, staphylococcus and streptococcus. Rosenow, *Jour. Inf. Dis.*, September, 1918, has reported a strain of streptococcus which he claimed has an elective localizing affinity for the mucosa cells, the injection of which produced chronic ulcers. Bacteria of various kinds have been found in ulcer walls, and as the initial lesions of ulcer are localized necrosis, localized hemorrhage and inflammation of the lymph follicles, it has been pointed out that the common cause of local necrosis anywhere is bacterial infection, acting either locally or by means of their toxins in the blood stream, which by destroying the endothelial cells of the capillaries pave the way for the local destructive action.

Infection of one or more of the lymphatic follicles so thickly studded along the lesser curvature, especially toward the pylorus, may give rise to a sub-mucous abscess which by rupture allows the gastric juice to act on the base of the ulceration thus exposed. Clinically, ulcer has been noted in connection with various infective processes, as diseased tonsils, infected appendix, gall bladder infection and infected teeth. Rosenow believed germs from an infected mouth affected the stomach mucosa by way of the blood stream rather than by swallowing. As variations of the theme of infectious origin Askanazy, *Revue Medicale de la Suisse Romande-Genève*, August, 1920, found the fungus *oidium albicans* constantly present in his ulcer cases, and noted in his experiments that this fungus grows best in acid media. To this fungus he ascribes the infection and advises combating the infection and thus curing the ulcer by neutralizing the acid favorable to their growth. Mongorge, *Lyon Medical*, May 25, 1920, on the ground that Jaksch and Brinton have asserted, that 25 percent of ulcer cases die of tuberculosis; and assuming that ulcer is a toxic-infectious disease; and as tuberculosis is the toxi-infectious disease par excellence, therefore he argues, round ulcer must be often of tuberculous origin. He cites ten cases of this kind.

The Role of Syphilis in Peptic Ulcer. It is rather surprising how little attention has been given to syphilis in the study of diseases of the stomach. Only within the last three or four years has serious attention been given to this problem, authorities having previously passed the subject by with the brief statement that syphilis of the stomach was rare. The prevalence of lues and its widespread activities throughout the body make it manifestly an impossibility that the stomach should escape damage. Furthermore, it is an erroneous idea to

conceive syphilis of the stomach only as a gummatous lesion, for it is a well known fact that the spirocheta pallida is a connective tissue parasite, and since the walls of the stomach contain much connective tissue, interstitial inflammation is possible.

Syphilis of the stomach, as one writer remarks, forms a fascinating problem, there being no clear cut symptomatology and no certain clinical findings to differentiate luetic gastric lesions from any other. The diagnosis can only be made by exclusion, and therefore no examination of gastric disease is complete that does not consider syphilis and include a Wasserman test. By so doing, within the last three or four years, more cases of syphilis of the stomach have been reported than had been previously in the history of medicine. There are two ways in which syphilis may affect the stomach: first, by a definite lesion in the form of a gumma, or an interstitial inflammation; and, second, as a part of a widespread manifestation such as arterio-sclerosis or disease of the nervous system. Therefore, although it is possible for a patient to have syphilis and his stomach not be luetic, yet if definite improvement of the gastric condition occurs under luetic treatment, it can be safely assumed that it is of luetic origin, especially if ordinary treatment had previously failed. Syphilitic ulcers of the stomach have in the past been conceived only as broken down gumma, yet there is no reason why syphilis cannot, through an endarteritis obliterans, an arterio-sclerosis, or a degenerative process in a nerve ending, produce a localized devitalized area subject to digestion by gastric juice, in the same manner as has been ascribed to other infectious organisms.

Smithies, *Am. Jour. Syph.*, January, 1917, describes syphilitic infection of the stomach wall first as a dense round cell infiltration of the loose areolar tissue. From this, four types of lesion may develop, (1) diffuse infiltrations causing thickening of the wall, (2) localized dense round cell groupings which may end, as miliary gummas, or coalesce, necrose and slough forming ulcers, (3) inflammatory nodules producing definite tumefaction, and (4) paragastritis with adhesions. The clinical manifestations from these pathological variations would be chronic gastritis, ulceration, tumor and perigastritis. Smithies reports 34 cases of gastric disease with positive Wassermans, of which 18.2 percent were found to have gastric ulcer and 41 percent duodenal ulcer. Other observers report anywhere from 3 percent to 10 percent of their gastric cases as luetic. In my laboratory I have definite records of 55 cases of peptic ulcer, of which 16 or 29 percent showed positive Wassermans and responded to anti-luetic treatment.

Two other cases which gave two negative Wassermanns also responded to anti-luetic treatment.

Conclusion. A study of the literature on these various theories brings out the startling fact that each theory has been definitely proven by laboratory and clinical experiments. Summing all the evidence up one might draw the conclusion that whatever experimental means was used the general result was a *lowered resistance*, and that coarse foods and the gastric juice did the rest.

Most writers agree that two factors enter into the etiology: first, there must be a localized loss of vitality or resistance, whether it be circulatory, traumatic or trophic, and whether these disturbances be caused by bacteria, hyperacidity, spirocheta pallida or toxins; and, second, that given such a vulnerable area of mucosa, an active gastric juice, usually but not necessarily hyperacid, brings about the formation of peptic ulcer by its digestive action.

Peptic ulcer is then a local disease brought about by a systemic disturbance causing local manifestations including lowered resistance, and blood stasis; second, the irritation of coarse foods abrading the devitalized area; and, third, the corroding action of the gastric juice.

Finally, in studying an individual case, all these factors must be kept in mind, particularly syphilis, and no examination of any gastro-intestinal lesion should be considered complete without a Wassermann test. When the time arrives when this has become a routine part of the examination, the statistics, in my opinion, will show a marked increase in luetic percentages.

ULCER OF THE STOMACH AND DUODENUM

DIAGNOSIS AND TREATMENT*

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The upper end of the gastro-intestinal tract from cardia to jejunum, including bile passages, liver and pancreas, are closely related embryologically, and are richly supplied with splanchnic and vagus fibers, so that irritating lesions in any of these structures would readily modify the function of those portions most active and most subject to change, viz., stomach and duodenum.

For the same reason the stomach and duodenum are very susceptible to functional or organic disturbances in other portions of the tube, and in other viscera, and to reflexes physical, nervous or psychic. Likewise because of their embryological development in the center of the

abdomen, the mind refers visceral pain to the midline, besides, from early childhood we have been taught to localize abdominal pain in the "stomach". These facts may explain the very common localization of abdominal visceral pain in the epigastrium, and the similarity of visceral symptoms in gastric and duodenal ulcer and in lesions of the bile ducts, liver, pancreas and other viscera, and in reflex influences.

While the ordinary somatic stimuli applied to the viscera and to visceral lesions are not adequate to produce the sensation of pain in the viscera, yet the natural stimulus to which the viscera are subjected, viz., adequate tension, or distension plus tone, produces a sensation of fullness if a certain degree of tension is slowly produced, or the sensation of pain if the same adequate tension is rapidly produced. It would thus seem that the stimulus for visceral distress or pain is adequate tension on the fibers of the muscular coat of hollow organs, or on the capsule of solid organs.

The same reasoning would suggest that gastric or duodenal ulcer symptoms are not due to direct mechanical or chemical irritation of the ulcer, but to intrinsic neuromuscular changes in gastric and duodenal irritability, rhythmicity, contractility and tone due to the influence of the ulcer on local metabolism, or reflex through extrinsic vagus and splanchnic nerve control.

In disease, and especially visceral disease, the cerebro-spinal nerve centers may become hyperirritable from constant amplified stimuli, so that their threshold of response is lowered, and impulses which are normally unnoticed may penetrate the nerve synapses and reach consciousness and be expressed as altered sensation (fullness, distension, hyperesthesia or pain) in visceral or somatic structures, and more especially does this occur in the epigastrium.

Nerve exhaustion from overwork or from too constant application as in the overzealous business or professional man, or the physically exhausted nervous woman, or from worry over business, health or domestic affairs, produce altered nerve response with symptoms frequently referred to the epigastrium.

Gastric sensibility and pain are largely influenced by nerve and psychic stability and irritability. The unstable, fatigued and irritable nerve centers of the neurasthenic are conducive to variable and magnified gastric sensibility. The perversions of interpretation of sensory stimuli as occur in the hypochondriac lead to various subjective symptoms of epigastric distress or pain. Apprehension, suggestibility and fear markedly influence gastric sensibility. Emotional and hysterical individuals often suffer with subjective gastric distress.

As functional disturbance of the nerve and psychic centers result in altered nerve response

*One of the papers of a symposium presented before the Indiana State Medical Association at the Indianapolis Session, September, 1921.

to stimuli in such a manner as to modify or produce gastric symptoms, to a greater degree does organic disease of the nerve centers modify nerve and psychic response to stimuli. Thus it is that the pain of a locomotor ataxia is referred to the epigastrium.

Again the antagonistic action in the viscera of the two divisions of the vegetative nervous system, the one activating and the other inhibiting action, maintains visceral equilibrium. When this equilibrium is disturbed by over-irritation of either system, a disturbance in function ensues and symptoms result manifested in disturbances of gastro-intestinal motility, secretion and sensation.

Acute pain, toxemias, acute infections or strong emotions stimulate the sympathetic nerves and inhibit gastro-intestinal tonus and spasm (sympathicotonia) while continued irritation, chronic inflammation (with but little toxemia), neuroses and anaphylactic states, stimulate the parasympathetic system and activate gastro-intestinal tonus and spasm often adequate for distress or pain (vagotonia). We also must remember that the sensibility of the two systems, while essentially unlike in different individuals, also is variable in the same individual.

Another confusing element is the epigastric or gastric distress and pain from disease or dysfunction in other viscera or other structures. This is well exemplified in acute appendicitis, where the earliest pain is visceral and is located in the midline in the region of the umbilicus (referred pain).

It is possible that the visceral stimuli may be sufficiently strong and persistent, or the threshold of nerve response amply lowered to induce viscerosensory, visceromotor or viscerosecretory reflexes adequate for true or reflex gastric distress or pain, which may accompany the "localized" pain, although their differentiation may be exceedingly difficult or impossible. Or the irritation from the diseased appendix may induce intrinsic neuromuscular irritability, contractility and tone in the stomach adequate for gastric distress or pain.

Simultaneous with this pain, or subsequent, is the pain, hyperesthesia and hyperalgesia in somatic structures supplied by spinal sensory nerves, which arise from the same spinal segment or segments to which the afferent sympathetic fibers which supply the appendix pass. The breadth of this reflex depends upon the strength of the afferent sympathetic stimuli and nerve cell resistance in the cord. The afferent impulse may be transferred to more widely spread efferent neurons, making the area of reflex response greater.

In a similar manner do diseases or disturbances of other viscera produce these types of

localized, true or reflex visceral pain. Angina pectoris is frequently diagnosed as "acute indigestion", chronic appendicitis or cholecystitis as "stomach trouble"; bowel distress or pain is frequently localized in the epigastrium; in pulmonary tuberculosis the symptoms are often gastric; pelvic or renal diseases often produce stormy gastric symptoms of nausea, vomiting and gastric distress or pain, while the symptoms of functional or organic nervous and psychic disturbances are frequently manifested in the stomach.

The effect of exposure in the production of colds is a common observation, the afferent impulses pass over the spinal sensory nerves, the efferent over the sympathetic nerves which influence vascular and visceral tone. Disease in somatic structures may similarly influence vascular and visceral tone. Exposure may produce a pleurisy, bronchitis or pneumonia, equally so may it disturb gastric or intestinal function. The vascular and visceral insult and decreased tissue resistance even producing acute inflammation with dull ache or acute pain and if persistent chronic inflammatory changes with corresponding modified function.

In like manner we may have gastric symptoms as a result of intoxications, or diseases of metabolism, of the blood and ductless glands. The epigastric pain of chronic lead poisoning or of the morphine habitue, the distress or pain in the epigastrium in anemia, chlorosis, diabetes and obesity are examples. The opposing action of pituitrin and adrenalin on unstriated muscle, the influence of over and under activity of the gonads, thyroid and parathyroids must always be considered. Not a few cases are operated for appendicitis, tubal, ovarian or gall-bladder disease, or treated medically for colitis, spastic bowel, gastritis or gastric or duodenal ulcer, when the real trouble may be an overactive pituitary or thyroid or under active adrenals, gonads or parathyroids.

It may thus appear evident that gastric symptoms simulating ulcer may be due to so many factors outside the stomach, its walls and orifices, that we are not justified in diagnosing organic disease in the stomach or duodenum from gastric symptomatology. However, there are certain differential facts or tests which may aid us in determining the nature and source of gastric symptoms.

The history and clinical symptoms of gastric and duodenal ulcer are so distinctive, as Movnihan has pointed out, that the diagnosis might be made by correspondence. This may be true of typical ulcers, but unfortunately most ulcers are atypical in their symptomatology, and this is even more true in gastric ulcers, besides the greater percent of all gastric symptoms are functional and simulate those of organic gastric

or duodenal disease⁶, so that the differential diagnosis requires the closest study, observation and analysis.

The ordinary typical ulcer history as understood is only a hyperacidity history and any condition giving rise to hyperacidity may simulate ulcer. On the other hand, ulcer may exist without hyperacidity, with normal or subnormal acid values, and thus without presenting the familiar typical history we have learned to expect. The vomiting of blood is not a common incidence in ulcer, and even the presence of blood in the vomitus, aspirations or stools is not conclusive of organic gastric disease unless extraneous sources are excluded, besides hematemesis may occur in association with hyperchlorhydria from any cause, when no ulcer or other organic disease exists. The ready relief of gastric pain by food, alkalies, aspirations and lavage if methodical and complete is good evidence of ulcer, and yet I have many times seen bowel or hunger distress relieved by the same means. The evidence of seasonal remissions, recurrences and chronicity seem conclusive, and yet in my experience some of the most typical chronicity ulcer histories have been cases of chronic pulmonary tuberculosis in which the added vasomotor insult due to weather changes during the spring and fall months reduced tissue resistance and induced sufficient acute pulmonary inflammation for reflex recurrence of gastric symptoms.

The entire absence of any gastric abnormality except subjective tenderness in the epigastrium or in one or the other hypochondrium on physical examination has long been assumed to be characteristic of ulcer, especially when history has created the impression that ulcer exists. A palpable tumor in the epigastrium is rarely due to cicatricial tissue of a chronic ulcer. When found it is usually a neoplasm. The discovery of peristaltic waves across the stomach means mechanical obstruction, with hypertrophy and tone of the gastric walls; but it does not by itself indicate ulcer any more than it does cancer, or adhesions, or possibly lesions in other viscera or structures. The value of the physical examination is the negative or positive findings in other viscera and structures, for we now know that various extragastric conditions may present a symptomatology similar to gastric or duodenal ulcer.

Too much reliance in the past has been placed on the analysis of gastric contents. The characteristic finding was hyperacidity; and when this was proved to exist, "after a typical ulcer history had been elicited and a tender spot in the epigastrium had been found, the last bit of evidence was supposed to have been adduced to justify a diagnosis of ulcer." It is true that hyperacidity accompanies ulcer, on the contrary

ulcer is almost as frequently found with acidity within normal limits or even below normal, while hyperacidity may be associated with numerous other conditions besides ulcer. Hence the old diagnostic combination of characteristic history, negative gastric physical findings, and hyperacid stomach contents may mean ulcer or various other conditions.

A common symptom in gastric or duodenal ulcer is hypermotility. The explanation probably lies in disturbance of local metabolism from mechanical or chemical irritation of the ulcer, resulting in intrinsic neuromuscular changes in gastric and duodenal irritability, rhytnicity, contractility and tone; or to reflex influences on gastric and duodenal motility and tone through extrinsic vagus and splanchnic nerve control, the fibers of which are plentifully supplied to the upper gastro-intestinal tract from cardia to jejunum. This increased gastric motility and tone is usually accompanied by inhibition of pyloric relaxation, due to increased gastric acidity, amounting often to pyloric spasm, and delay in gastric emptying often sufficient to suggest mechanical obstruction, or the mechanical obstruction may be due to induration or cicatricial scar from chronic recurrent ulcer. But here we must also remember that similar disturbances in gastric motility and emptying may be due to cancer, or to lesions in other portions of the gastro-intestinal tract or in other viscera, which produce increased gastric acidity, or inhibition of pyloric relaxation and gastric motor irritability.

The fluroscope is of inestimable value in the study of gastric motility and gastric emptying. The fluorescent screen enables us to study gastric waves, their number, rhythmicity, depth and the manner in which they fade away at the contraction ring; also the duodenal cap, and the rapidity of gastric and duodenal emptying. In case fluoroscopic examination suggests crater or puckering deformity or motor interference, roentgenograms are indicated for detail and graphic record. It should be remembered, however, that anatomical defects may not show in the roentgenograms if they be on the posterior aspect of the stomach or duodenum as frequently occur, or on the anterior surface as occasionally happens, or unless the defect is placed in proper perspective, or the stomach properly distended by the barium meal.

We have learned, if no evidence of ulcer appears from the fluoroscopic or roentgenographic examination, to distrust all other evidence, no matter how convincing it may appear. On the other hand disturbed motility or retarded gastric or duodenal emptying, or apparent defects in the outlines of the pylorus, duodenal cap, antrum, fundus, or greater or lesser curvatures, suggesting the presence of ulcer, should

not be interpreted as positive proof unless other evidence coexists in history, physical examination, laboratory findings and clinical test outs. This whole question of the results obtained by gastro-intestinal roentgenographic examinations is a very serious one, for no man can devote his time both to clinical investigation and to roentgenographic technic without doing injustice to one or the other, and roentgenographic evidence is misleading and worthless unless taken in connection with the history and physical examination, laboratory and clinical findings.

The majority of stomach ulcers that are located on the lesser curvature or posterior wall, and distant from the pylorus, usually give rise to few symptoms and heal without treatment.

No doubt pyloric and duodenal ulcer symptoms disappear under various treatments, medical or surgical, or without any treatment. Many cases presenting symptoms of gastric or duodenal ulcer are not ulcer, but temporarily respond to any treatment which offers rest, restricted diet and better drainage, symptoms recurring again under like conditions. Likewise all ulcer cures, medical or surgical, are not cures, only symptoms are relieved, the ulcer does not heal.

The fundamental questions in the treatment of ulcer as stated by Sippy are: (1) What retards or prevents ulcer healing; (2) What can we do to promote best the development of granulation tissue essential to the healing and final cicatrization of ulcer; (3) What procedure is best to prevent and relieve complications?

It has been proven that a small amount of free hydrochloric acid in the stomach is just as potent in activating the pepsin as a high degree of acidity, also that while acid gastric juice may not be the cause of peptic ulcer, yet it is usually present in varying amounts in active ulcer, and inhibits or prevents ulcer healing either by its corrosive action, or by its influence on gastric hypertonus, peristalsis and pyloric inhibition, preventing gastric and duodenal rest so necessary to ulcer healing.

It would therefore appear that proficient treatment of gastric or duodenal ulcer would require complete neutralization of free gastric acidity. This is best accomplished by food, alkalies and gastric aspirations. Temporary starvation and rectal feeding are unnecessary because three or five days' abstinence of food in the stomach is of little value in quieting spasm, peristalsis and tone, and the presence of non-neutralized acid in the fasting stomach may produce corrosive action, besides rhythmic systoles due to hunger interfere with physiologic gastric rest and irritate the ulcer.

The alkalies ordinarily used are sodium bicarbonate, calcium carbonate and heavy magnesium oxide, the magnesia being desirable to the point

of bowel tolerance because of its high and continuing neutralizing power and its laxative properties, the sodium bicarbonate and calcium carbonate to complete the neutralization.

The alkalies are given frequently because of their fleeting action, with sufficient aspirations to make sure free acidity is controlled, therapeutic aspirations in case of pain with lavage if necessary, and routine aspirations to check control. It is desirable to use sufficient alkalies to neutralize the free acidity and not alkalinize the gastric contents. Combined acids do not interfere with ulcer healing, besides the normal habitat of gastric epithelium is an acid or at best a neutral medium. However, I have failed to see any pernicious effects from over alkalization, more often are failures in treatment attributable to underneutralization. Indeed the best medical treatment for ulcer hemorrhage is overalkalinization and physiological gastric rest. Little if any stimulation of acid cells results from alkalies, and mucoid secretion is reduced by removing the acid irritation of the ulcer. Besides complete neutralization lessens the tone and motility of the stomach, removes pyloric inhibition, and enables the stomach to empty more readily, more easily and completely and with less irritation to the gastric or duodenal ulcer.

No doubt there is an added increment of motility from gastric aspiration or lavage, however the slight disturbance of relative gastric physiological rest is minor compared to the failure of underneutralization with its consequent increased gastric tone and motility and local irritative and corrosive action.

Food combines free acid forming acid albumins and peptones which interfere but little with ulcer healing. Combined acids are readily neutralized by the alkaline juices of the duodenum which removes pyloric inhibition and enables the stomach and duodenum to empty more rapidly with the least effort and irritation and with consequent less acid secretion and more relative physiological rest.

Liquid carbohydrate mixtures (barley water, rice gruel, cream-of-wheat gruel, etc.) probably require the least gastric and duodenal digestion, excite the least acid secretion and pass relatively rapidly through the stomach and duodenum; but they have no acid combining power, have but little food value, are not balanced in proteins, carbohydrates and fats to properly and sufficiently nourish ulcer patients who usually are anemic and poorly nourished.

In the early treatment equal parts of milk and cream give us the most ideal food from every standpoint, the protein clot being of minor significance. The milk and cream should be given frequently and in small quantities in order that they may least disturb physiological rest, excite

least acid secretion, best neutralize free acidity, and furnish adequate heat calories for the resting individual, being alternated with alkalis adequate to complete neutralization of any free acid. Later in the treatment other foods are added, bearing in mind the principles stated.

"The old and generally accepted belief that gastric juice corrosion is the most important influence that retards the healing of ulcer receives confirmation from the results that are obtained by all methods of treatment that have contributed to the healing of ulcer. In the light of all present knowledge, the development of granulation tissue leading to the healing and final cicatrization of ulcer is promoted by a given type of medical or surgical treatment directly proportionate to the influence exerted by that treatment on the duration and intensity of gastric juice corrosion."

When to the clinical picture of chronic ulcer is added the evidence of pyloric obstruction, furnished by repeated vomiting of retained food, the presence of food in the fasting stomach, the presence of sarcine and continuous secretion, the occurrence of peristaltic waves and the demonstration of barium residue, the essential problem of treatment becomes how to relieve the mechanical interference and how to prevent complications, and give the patient the best opportunity for health and life and after usefulness.

To conscientiously solve this problem requires the answer to several questions; viz., (1) What is the danger of cancer on ulcer? (2) Can we hope in these types of cases for relief and cure from medical and dietetic treatment? (3) What does surgery offer? (4) What is the percent of mortality from medical and surgical treatment?

1. Because as has been stated by Smithies and the Mayos that 60 percent of gastric cancers, demonstrated surgically and pathologically, have antecedent histories, which clinically cannot be differentiated from chronic gastric ulcer, is no indication, even if it be true, of antecedent ulcer, as ulcer histories are evident in so many other conditions, as demonstrated by Cheny, Einhorn, Boas, Rosenheim, Sippy and many others. Einhorn says: "If I should select only cases in which I could make a diagnosis of cancer based on ulcer, I would have a proportion of one in twenty or less." In addition postmortem pathologists have often confused these cases with those in which cancer becomes necrosed and forms an ulcer on its base, which is of frequent occurrence. If the cancer is found at the base of a so-called ulcer it is good evidence that it was cancer from the beginning; if found on the margin of an indurated ulcer the base and cicatricial tissue free from cancer evidence is

cancer developed from ulcer. There is practically always more or less ulceration in cases of cancer, but that is an entirely different proposition from the development of cancer from ulcer.

Cancer histories ordinarily appear suddenly in an individual previously healthy, with few antecedent gastric symptoms. It is true we may have cancer with antecedent ulcer history, but ulcer symptoms do not always mean ulcer, and ulcer symptomatology is atypical and especially gastric ulcers. Even with these chances of error, ulcer history preceding gastric cancer is not the rule. It will not do to say that if careful histories were taken ulcer evidence would be found. This may be true in some instances, but the evidence of the best clinicians bears out the above statements.

Friedenwald in his clinical history of 1,000 cases of cancer of the stomach found only 23 percent that gave a history of any previous digestive troubles, and only 7.3 percent in which previous history could be interpreted to mean chronic gastric ulcer. Lockwood says that among 174 cases of gastric cancer he found only 7 percent that gave a history pointing to previous ulcer. Boas says such metamorphoses (ulcer to cancer) is not to be numbered among frequent occurrences.

No doubt cancer develops on ulcer, but the reports of the Mayos of such metamorphoses is far too high if we are to believe the experience of a large number of clinicians, pathologists and surgeons, and to operate all gastric ulcers on the ground that they are potential cancers would be applying to all cases a method of treatment applicable to the minority of cases, and the mortality from operation would be greater than the mortality of subsequent cancer, for these operations are not all performed by the Mayos or by those surgeons equally skilled.

2. Can we hope in these types of cases for relief and cure from medical and dietetic treatment?

That chronic gastric ulcers heal by granulation and fibrosis under proper conditions the same as chronic ulcers in other portions of the body cannot be denied. Will Mayo says: "While no one would contend that every gastric ulcer should be surgically treated, we at least should agree that if permanent cure does not take place within a reasonable period, other things being equal, the patient should have surgical treatment."

Experience has demonstrated that pyloric spasm and inflammatory exudation in pyloric and duodenal ulcer, producing mechanical obstruction, disappear under careful and energetic medical and dietetic treatment and rest. Round cells and other exudative products are removed, the infiltrated tissue grows thinner in all directions, the edema disappears and the pyloric

opening becomes more patent, when healing of the ulcer takes place, notwithstanding the tendency of fibrous tissue to contract.

No one claims that fibrous tissue once formed is ever removed but if the stomach after treatment is able to empty on time a motor meal without distress and with moderate motility, regardless of the tumefaction or deformity resulting from the fibrous healing of chronic ulcer, medical treatment has accomplished as much as most surgical measures usually offer, viz., mechanical relief.

If after reasonable time the mechanical obstruction is not amenable to careful and energetic medical and dietetic treatment and rest, or if relapses occur, or if the individual is approaching the cancer age and, having continuous rather than intermittent type of gastric disturbance, exploratory and if necessary radical operation is indicated.

3. What can surgery offer?

I shall leave this question to the men qualified to answer. However, it seems to me that the only operation that offers cure of gastric and duodenal ulcer is excision or cauterization of the ulcer combined with posterior gastro-enterostomy.

After gastro-enterostomy alone food and secretions continue to pass through the pylorus proportionately to the size of the opening that exists through the strictured area of the pylorus and duodenum, and the reason the ulcer heals in the course of time after gastro-enterostomy is the same as the reason that a majority of the non-obstructive types of ulcers heal by various methods of treatment or by no treatment, viz., better drainage and less duration and intensity of gastric juice corrosion.

No one questions the indication for surgery in the complications of ulcer not amenable to medical and dietetic treatment. In my judgment surgery is a necessary part in the treatment of selective cases of gastric and duodenal ulcers, and the medical man must assume the responsibility, and it is just as much his duty to provide a competent surgeon as to provide a competent medical treatment.

4. What is the percent of mortality from medical and surgical treatment?

The operative mortality record from the Mayos of gastric ulcers is 4.5 percent, and of duodenal ulcers 2 percent. The mortuary record for the first six years following operations for gastric ulcer compared to the same number of persons from the general population with like distribution as to age and sex, is four times as great for the first year, three times as great for the second year, two and one-half times as great for the third year, twice as great for the fourth and fifth years, and equal for the sixth year. An average of $2\frac{3}{4}$ percent greater for

the six years. No such difference was observed after operation for duodenal ulcer. No statistics are available in non-operated cases of gastric and duodenal ulcer, and accurate statistics in this group will probably never be entirely possible, because the uncertainties in diagnosis discount more or less the dependability of such figures.

The diagnosis and treatment of gastric and duodenal ulcer are among the most difficult things in medicine and surgery. The medical man, the surgeon, the laboratory man, the roentgenologist and the pathologist should work together. It is unjust to unnecessarily subject the patient to surgery or a long course of medical treatment when careful diagnosis would prevent. On the other hand it is just as wrong to deprive the patient of necessary surgical or medical care. A few questions and a prescription or exploratory incision lead to medical and surgical disrepute. Too often do we have patients following abdominal or pelvic operations with symptoms the same or exaggerated, or patients treated medically when the condition is obviously surgical. We probably differ as to what constitutes a medical or surgical condition, but it should be a difference of careful analysis and open mind and not one of arrogant opinion. With the most careful and conscientious work and the closest cooperation mistakes are made which after thought shows to be indefensible.

ULCER OF THE STOMACH AND DUODENUM

SURGICAL TREATMENT*

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A majority of cases of gastric ulcer which refuse to yield to medical treatment are curable by surgery. The oldest and perhaps most important indication for surgery is represented by cicatricial narrowing of the pylorus due to healed or healing ulcer. Here the correct treatment is not far to seek. It consists in the establishment of a new avenue of communication between the stomach and small intestine by means of gastroenterostomy and less frequently by operative widening of the narrowed pylorus—the pyloroplasty.

In early ulcer at or near the pylorus gastro-enterostomy by diverting the stream of stomach contents protects the ulcerated area and favors cure. Patterson of London has contended that the mechanical or anatomic conception of gastroenterostomy is erroneous. He does not look upon it as a drainage or food short circuiting procedure, attaching little importance to this

*One of the papers of a symposium presented before the Indiana State Medical Association, Indianapolis Session, September, 1921.

phase, but regards it as a physiologic or chemical operation and maintains that the cure of gastric ulcer after gastroenterostomy is brought about by the entrance of alkaline duodenal juices into the stomach through the new stoma, the hyperacidity of the stomach contents being thus overcome and healing effected.

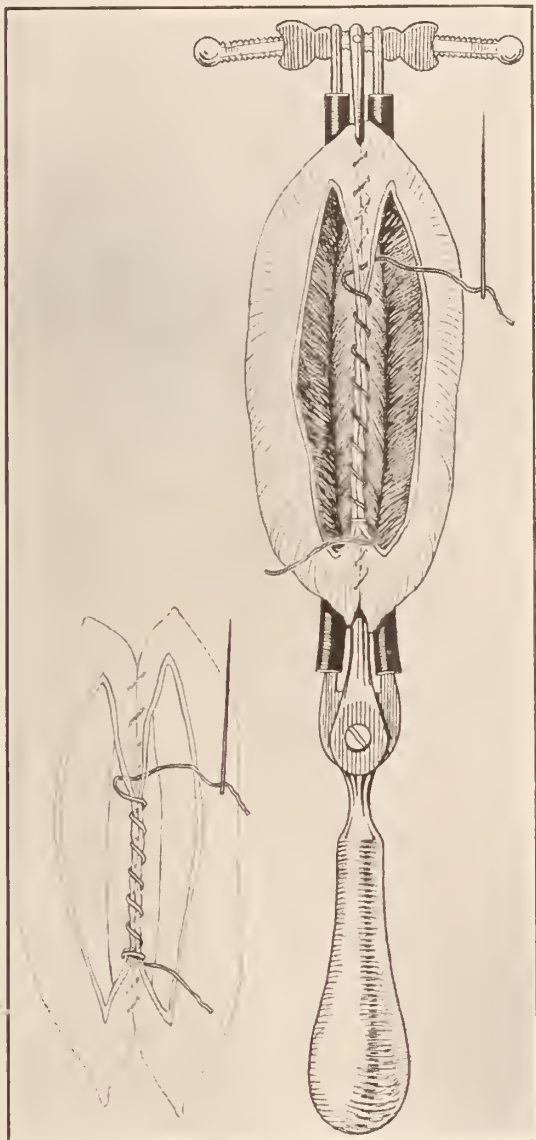


Fig. 1—First or lower half of hemostatic suture introduced as simple over-and-over stitch—may permit bleeding.

Cure of gastric ulcer following anterior gastroenterostomy which affects drainage only, imperfectly, and other data support the claims of Patterson. On the other hand, it is difficult to explain the cure of gastric ulcer after pyloric exclusion, for example by Von Eiselsberg's plan (in which the stomach is divided toward the cardia, the ends closed and gastroenterostomy done on the cardial stomach sack) by assuming

a change in stomach chemistry, since here the new stoma establishes no new communication between the duodenum and pars pylorica.

It has been maintained by the friends of Patterson's view that cure of ulcer of the cardiac end by gastroenterostomy cannot be due to relief of irritation of the ulcer area through short circuiting, hence they turn to the changed chemistry or alkalization by duodenal contents for explanation. However, it seems just as reasonable to regard gastroenterostomy in ulcer of the cardiac end as a step which cures by overcoming stagnation of stomach contents, reducing hyperacidity by more rapid emptying of the stomach and this need not imply disrespect for the view that entrance of bile and pancreatic

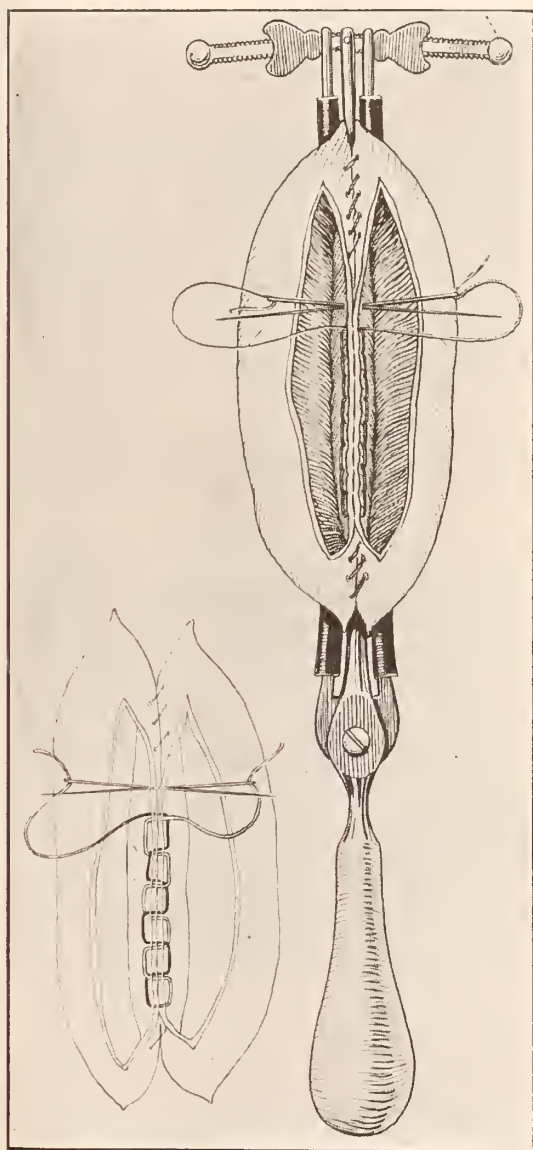


Fig. 2—Hemostatic suture uniting mucous membrane introduced as Cobble's or Harness Maker's—waxed end is employed.

juice through the new stoma is an important factor in cure of *ulcus ventriculi* by gastroenterostomy. But regardless of the view which one may favor as to the way in which gastroenterostomy cures gastric ulcer, the fact remains unshaken—gastroenterostomy does cure benign ulcer and with gratifying regularity.

The operative mortality of gastroenterostomy depends upon many factors, but should be comparatively slight. It is certainly small in all those patients which have not been weakened by inanition and repeated hemorrhages. In cicatricial stenosis of the pylorus the good results of gastroenterostomy are prompt to appear and lasting. The motor and secretory activity of the stomach returns to normal, or approaches it. In ulcer of the pylorus gastroenterostomy added to pyloric exclusion as with the Wilm's fascia ring nearly always brings cure.

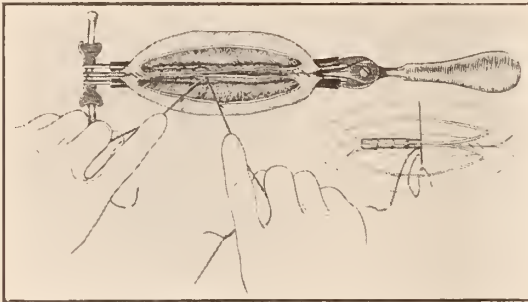


Fig. 3—Running knotted loop suture to control bleeding of mucous membrane. Introduced almost as readily as a simple continuous over-and-over stitch, but is in effect a series of interlocking interrupted sutures.

The ulcers of the body of the stomach, especially those of the lesser curvature, are not always relieved by gastroenterostomy. Bamberger found that eighty percent of all gastric ulcers are cured by gastroenterostomy. Sixty percent of ulcers of the body of the stomach are thus relieved. It should be remembered that it is the ulcer distant from the pylorus which is most likely to be associated with inflammatory tumors of the stomach wall, the callous penetrating form not infrequently involving the pancreas, liver and spleen. These are the cases requiring cauterization or resection in addition to posterior gastroenterostomy. (Rodman operation or the Bilroth number one or number two.) The importance of resection of the ulcer bearing area in such cases is only too often emphasized by the post-operative finding of carcinoma in clinically benign callous ulcer.

Crile (*Ohio State Medical Journal*, Sept. 1, 1921) is convinced that no absolute differential diagnosis between cancer and ulcer is possible before operation; nor at the operation except by the pathologist; nor by the pathologist in certain borderline cases. Respective of opera-

tive treatment, the dietetic management of all ulcer cases is an essential before and after surgical intervention. In patients, exhausted by long standing ulcer or cancer, conservation and restoration of bodily economy must be secured by restoration and preservation of the acid-alkali balance of the cells, particularly of the brain and liver; maintenance of an adequate circulation; as well as a minimizing and, where indicated, a dividing of the trauma of operation.

There is, of course, no debate as to the value of surgery in perforation of stomach ulcer. This happens most frequently in ulcers near the pylorus and here, owing to the mobility of this portion, the chances of adhesion formation with walling off are slight. Pain, nausea, collapse, the boardy, hard, concave, canoe abdomen mean immediate operation, closure of the perforation with or without gastroenterostomy, according to the condition of the patient. A patch of omentum over the sutures closing the perforation is often of value, and careful mopping out of the escaped contents without irrigation is imperative. We are advised by some surgeons to close the abdominal wound after such an operation without drainage. I cannot bring myself to this view.

In perforating duodenal ulcer, the chances of cure by operation are not so good as in gastric ulcer, but in either case the result is nearly always determined by the ability of the attending physician to diagnose the condition promptly. In the first twenty-four hours the chances of success sink from eighty to thirty percent. In duodenal ulcer, before perforation most surgeons incline to posterior gastroenterostomy with pyloroplication, pylorus closure by fascia, or pyloric exclusion.

The most rational method of gastroenterostomy is the so-called short loop posterior type, the gastroenterostomia retrocolica of von Hacker, with the added precaution of Peterson and Mayo, in which the stoma is made in the very uppermost part of the jejunum, which lies against the posterior stomach wall, separated only by the weblike transverse mesocolon. If this precaution is observed, vicious circle is practically eliminated. The opening in the intestine should be at the flexura duodenojejunalis, or at a more deeply situated point. The transverse colon is delivered through the wound, the mesocolon spread out, and a nonvascular area found. The clamp is laid on the gut and stomach and the seroserosal anular proximating suture of No. 1 chronic catgut is passed close to the clamp

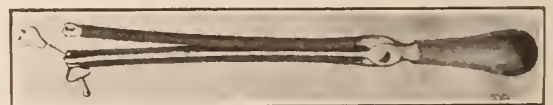


Fig. 4—An efficient and convenient anastomosis clamp of uncomplicated construction.

jaws in a line a few millimeters below the lines of incision into the gut and stomach. Obviously, the seroseros suture must extend beyond the lines of incision in the gut and stomach at both ends. Before continuing the serous suture around and above the incisions, the margins of the openings in the gut and stomach are united

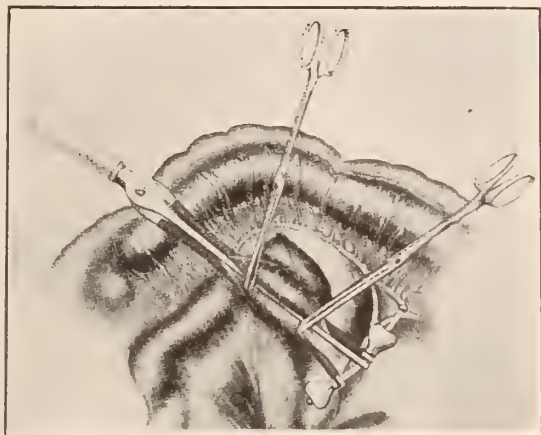


Fig. 5—Either side of clamp can readily be loosened for readjusting stomach or intestine by unscrewing the wing-nut.

by the hemostatic suture of catgut. This suture may be introduced for the first half of its length in the simple over and over fashion, or as a cobbler's or a harness maker's stitch with a needle at each end, this insuring better hemostasis in a position which after completion of the operation would be difficult of access. For this hemostatic suture the writer uses the running knotted loop suture shown in illustration number three. This knotted suture prevents bleeding of the mucous membrane in a most satisfactory degree. It is introduced as readily as a simple running or continuous suture and has the effect of a row of interlocking interrupted sutures. If a hemostatic suture is begun as a simple over and over stitch, it is continued over the stoma as a running Cushing suture, applied by the outside-inside, inside-outside rule. Either the cobbler stitch or the knotted loop suture can be carried completely around the stoma, inverting and securing the margins as well or even better than the running Cushing suture. After the hemostatic suture is in place all around, the serosa suture is picked up and applied in the last half of its course. In posterior gastroenterostomy additional guy sutures are not often necessary. A step of great importance is the securing of the margin of the openings in the transverse mesocolon to the stomach by interrupted sutures to prevent prolapse and hernia of the stomach through this layer.

The gastroenterostomy clamp shown in the illustrations has, it is believed, advantages of

construction and application sufficient to justify its recommendation to anyone doing operations on the stomach and intestines.

In applying this clamp there need be no confusion as to which is the top or bottom of the instrument, nor as to which is the right or left side. Pressure can be gauged accurately by turning the wing-nut which rests with a ball-seat in a concavity on the outer side of the end of each of the lateral bars. The wing-nut moves upon a short, thin, threaded lever which is attached by a hinge joint to the end of the median bar. The lever swings radially into a slot at the distal end of the lateral bars or jaws of the clamp. It is quite easy to release pressure on either side without loosening the other side so that, for example, the intestine or stomach may be drawn up farther into the grasp of the clamp, if desired, on either side, without releasing the opposite side. This can be done with other intestinal anastomosis clamps; but as in the case of scissors-handled forceps, this step may require a little time and art.

After the introduction of the inner hemostatic suture both sides may be released, so that the seroseros approximation secured by the outer suture may be accomplished without traction and consequent tearing out of the suture and without danger of the operative field slipping into the abdomen and out of convenient reach. The lever and wing-nut device at the distal end of the clamp has been used in other clamps and its value is well known to those who are familiar with the embarrassments incident to imperfect



Fig. 6—Both sides of the clamp can be loosened to permit completion, the operative field still being held up in favorable position.

closure at the distal end of the anastomosis forceps. After the completion of the anastomosis, the threaded levers are placed in alignment with the median bar before withdrawal of the instrument. The slanting margins of the heart-shaped wing-nuts, and their small size, prevent catching of the instrument as it is withdrawn.

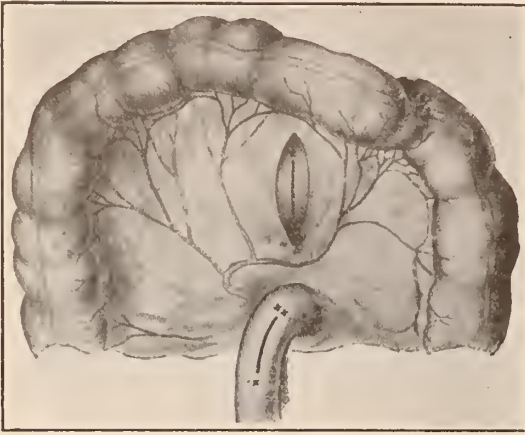


Fig. 7—Position of incisions in jejunum and stomach in posterior no loop gastro-enterostomy. Intestinal incision at duodeno-jejunal flexure.

The median bar of the clamp is not so thick as it is in other clamps, thus minimizing the possibility of tension upon any other sutures. The large proximal hinged joint of the instrument has been made very heavy and strong intentionally with a view to securing durability and firmness.

In order to secure an elastic spring pressure along the full length of the clamp, the bars deviate gradually from the median bar in the distal half and are so tempered that the screwing down of the wing-nuts accomplishes firm pressure without crushing.

This instrument is light in weight, simple and convenient to use, holds the stomach or intestine firmly with nicely adjusted pressure, is easily and quickly applied and removed, and is inexpensive.

DISCUSSION

DR. MILES F. PORTER (Fort Wayne): Taking up first the paper of Doctor Rhamy and speaking to the point of the syphilitic stomach, there are a few things I would like to emphasize. First, that between ten and fifteen percent of the population are syphilitic; twenty percent of the sick population are syphilitic, regardless of the character of their illness. Given, then, a positive Wassermann plus a diagnosis of stomach ulcer, it does not follow by any means that your stomach ulcer is essentially syphilitic in its character, or that antisiphilitic treatment should be expected to cure that individual. Given a case of stomach ulcer in a syphilitic it may be that that ulcer is in a measure the direct result of the syphilitic infection, and, on the other hand, it may be that the syphilitic infection is an etiologic factor, but only in an indirect way. That is to say, that the ulcer in this particular case is not due to involvement of the connective tissue by virtue of the stimulation from the spirochete, but due to the general fact that syphilis reduces the resistance of

the individual. Some of you will recall that a large percentage of all of our cases of meningitis and hip joint disease does occur in syphilitic trouble. In Melbourne, Australia, out of the ten percent of the child population which is syphilitic the Children's Hospital gets over fifty percent of its sick babies. This is the effect of syphilis in reducing the biologic resisting power of the individual, aside from other changes produced by the spirochete.

Reeves' investigation regarding the anatomic reasons for ulcer along the lower curve of the stomach has been referred to. The arteries here are along the borders, they do not anastomose often, and the physical location of this part of the intestinal tract is such as to submit it more often than any other to trauma, and it is because of these conditions that we most often find ulcer of the lesser curve and near the pylorus.

I would like to emphasize the point of gastric hemorrhage, one of the causes for surgery in these cases. Given a case of gastric ulcer and hemorrhage, while it is usually logical to assume that the hemorrhage is from the ulcer, yet that is not always true. I have had the misfortune, or the fortune if you please, to operate for duodenal ulcer and have my patient continue to bleed; then to refer him to another clinic and have the pyloric section of the stomach removed. He had a duodenal ulcer and hemorrhage from the ulcer; but he also had hemorrhage from arterial degeneration consequent upon myocardial renal disease and high pressure, and the bleeding happened to come from the stomach.

I have for some years used, with great satisfaction, the clamp shown by Doctor Eastman.

I want to call attention to a possible misapprehension that may come from quotation of the statistics from the Mayo Clinic as to deaths following treatment. I want to say that all of the deaths in the Mayo Clinic are regarded as deaths from operation, provided the individual dies in the hospital while there, perhaps in ten days or two weeks' time.

I would also like to say in regard to the number of cases cured medically or surgically, that the ulcer of the stomach that comes to the surgeon has been cured by the internal man on an average of six times before it is finally and permanently cured by the surgeon.

DR. A. B. GRAHAM (Indianapolis): That we are not of one and the same opinion, and that as yet we have failed, as McCaskey says, to evolve a "harmony" out of the conflicting current views on so-called peptic ulcer, is substantiated clearly when we review carefully the abstracts of the papers comprising the exceedingly interesting symposium which has been presented for our consideration this morning.

As to the etiology and pathology of gastric and duodenal ulcer, Doctor Rhamy has covered this field in a most thorough manner. Until more accurate data or proof is furnished we shall continue to agree with him in the opinion that as to the etiology of ulcer the essential factor is a localized loss of vitality permitting auto-digestion.

Many gastric and duodenal ulcers are easy of diagnosis; some demand all the methods of examination at our command for the making of diagnosis; and in a small percentage of cases we fail to make a correct diagnosis. I agree with Dr. Foreman that gastric secretion is influenced by many factors outside of the stomach, and should receive due consideration in every case; but my personal experience will not enable me to corroborate his statement that the amount and character of the gastric secretion gives little knowledge of the pathology of the stomach. I appreciate fully that in this opinion he has the support of some well-known physicians, and yet, after twenty-five years' experience in gastro-enterologic work, both medical and surgical, it is my opinion that gastric secretions give important data which is valuable in the making of a diagnosis of gastric and duodenal ulcer. Gastric analysis alone will not make the diagnosis of ulcer, but I do maintain that in my experience it has proven of sufficient importance to maintain a prominent position with the other methods of examination employed daily in our work. Without a gastric analysis it is impossible to say with any degree of certainty what is the secretory or motor activity of a given stomach, but the routine examination of the gastric contents, properly interpreted, gives us a fairly accurate determination of the secretory and motor activity, it enables us to study and interpret the chyme, the presence or absence of mucous or any abnormal material, and, finally, we can determine the presence or absence of macroscopic or occult blood—all of which assists in the correct diagnosis of ulcer. In former years, when we employed the Ewald tube and expressed the stomach contents one hour after the ingestion of the test breakfast, our studies of these contents did not give us as valuable data as we are obtaining at the present time. It was with this method (the horror of the large tube) that factors outside of the stomach, mostly psychic, influenced the secretory activity to such an extent as to spell failure in a small percentage of our cases and prove of little value as a diagnostic method. During the past three years we have been making fractional studies of the gastric contents, employing for this work the gastro-duodenal tube. In a certain percentage of cases the psychic element is also present, but since we keep the tube *in situ* from an hour to an

hour and a half, the patient loses her fear of the tube and we secure very definite data as to the secretory activity, where a correct technique is followed. With this method our percentage of correct diagnoses has shown a decided upward trend, as has been corroborated by both the roentgenologists and surgeons who have been associated with us in this work.

My statistics do not conform with those of Moynihan and others—that 20 percent of ulcer cases show a hyperacidity, and that the other 80 percent are equally divided between normal and diminished secretory activity. With the fractional method of study, 80 percent of our patients have shown a secretory activity in excess of the highest point of normal.

I am unable to support the statement that gastric symptoms are motor rather than secretory. My records show that in those cases in which the secretory activity has been highest, the misery and pain has been the more intense, and the spasticity as revealed by the fluoroscope the more pronounced. Motor activity, tension and spasticity do play a role in the production of this misery or pain, but when one repeatedly relieves this symptom by the administration of alkaline medication, it is difficult to eliminate the direct contact of HCl with the ulcer as the real primary factor of the pain and spasticity in many cases. The same is true of anti-spasmodics, such as belladonna and atropin.

As to the statement that the relief of pain is not a safe guide in treatment, I can only say that in my own work I have always felt somewhat secure when my patients inform me that they are free from pain.

As to the treatment, the most important matter from a prophylactic standpoint is the subject of excess secretion, and matters pertaining to the general state of health, such as nervous symptoms, anemia, debility and sub-nutrition, should be cared for. Every effort should be made to decrease the stomach secretion and increase the general state of health.

When the diagnosis has been made the patient should be put to bed and the strictest discipline insisted upon in the way of complete rest, diet, medicine and hygiene. Failures in medical treatment come from indifferent or incomplete discipline, and by its observance such complications as hemorrhage and perforations are minimized. At least three weeks (preferably five) in bed should be insisted upon, and appropriate treatment should then be instituted for several months, even though the patient be symptom-free of ulcer. Even under the best of conditions and in the best hands failure results, and this is especially true in perforation, post-ulcer sequelæ, and chronic ulcer. I believe that uncomplicated ulcer, in its early stages and when properly cared for, is always a medical condition.

It cannot be denied that surgical intervention, with its improved technique, and with more careful selection of cases, is showing a marked diminution in mortality and increased success each year. Surgical interference in hemorrhage of the copious type is contraindicated. In perforation, always a surgical condition, medical treatment can show 5 percent recoveries, while early surgery shows 65 percent recoveries.

Post-ulcer conditions, such as hour-glass contraction, pyloric stenosis, peri-gastric adhesions, persistent gastrosucorrhea, are all surgical conditions. My experience has been that a majority of true chronic ulcers are surgical conditions. Some such cases can be relieved, or even cured by medical therapy, but the percentage is exceedingly small.

I have never seen or heard of the comparison of gastric ulcer with anal fissure. Those of us who are called upon to treat the latter condition know that when it is superficial a well-directed local treatment as a rule effects a cure; but when it has become a chronic ulcer involving the external sphincter muscle and surrounded by cicatricial tissue, surgery is our only hope of effecting a cure.

In conclusion, I hold to the opinion that gastric and duodenal surgery should be performed by men well qualified for such work. This is no work for the novice, but calls forth the best work of which the best surgeon is capable.

DR. W. D. ASBURY (Terre Haute): This symposium presupposes two lines of treatment for gastric and duodenal ulcer—medical and surgical—and our earnest effort should be, not our individual thought about the matter, but the thing that will bring the most good to our patients, whether that be medical or surgical treatment.

The term "peptic ulcer" is not a good one and should be discarded. It is misleading.

As to the cause of gastric and duodenal ulcer, perhaps no one has solved that problem. The experimentally produced gastric ulcers, such as those produced by Carlson, are not at all comparable with the ulcers one finds in his patients, nor is the healing of these ulcers to be compared with the healing process in actual practice. The predisposition of the patient, the lowered resistance, and many other factors make an artificially produced gastric ulcer very different in its formation and healing from those ulcers in patients who come to us for treatment. Hyperacidity, whether the result or the cause, has something to do with gastric ulcer in most cases, and good results have been accomplished when this acidity is scientifically controlled both day and night.

Every patient coming for examination for gastric and duodenal ulcer should have a blood Wassermann, and pulmonary tuberculosis with

stomach symptoms should be carefully excluded. In making a diagnosis no one symptom or test is sufficient. A comprehensive and accurate history is of prime importance. A fluoroscopic examination is often of greater diagnostic value than an x-ray on account of motility and mobility.

DR. F. W. FOXWORTHY (Indianapolis): One of the essayists has, of his own volition, designated two periods in the life history of gastric ulcer. The first is the period before the ulcer exists, which he kindly assigns to the internist; the second, or the one of actual existence from beginning to end, he has the delusion belongs to the surgeon only. May I not add a third period, which often occurs after operation and only too often is sent to the internist for relief—the period of recurrence of previous symptoms. The great life insurance companies find that applicants who have had a gastro-enterostomy have a higher mortality than when the ulcer is treated by medication. Smithies, reporting 273 cases of gastro-enterostomy for ulcer, shows only 20.9 percent free from clinical symptoms afterwards.

Judd reports 101 cases of jejunal ulcer following gastro-enterostomy, 25 percent of which showed foreign material (threads).

Asche, four years after a gastro-enterostomy, found a double thread two inches long, causing the ulcer.

Mandl shows fully 200 cases of post-operative peptic ulcers. He states that scraps of silk suture have been found so often in the vicinity of peptic ulcer that there can be no doubt this is a contributing factor in some cases.

Haberer, with 205 cases of operated duodenal ulcer, states that gastro-enterostomy does not give very satisfactory results. He has several times been obliged to operate for recurrence when the pylorus has been cut off.

Payr, reporting 59 cases of duodenal ulcer operated, is pessimistic as to the outcome, referring to the comparative frequency of peptic ulcer after radical intervention.

Davis reports from 15 to 40 percent of operations performed for gastric ulcers as failures; at least, they do not restore the patient to sound health.

Eusterman, reporting 82 cases of post-operative ulcer from the Mayo Clinic, states 47 followed gastro-enterostomy elsewhere.

Eggleston reports only 42 percent of cured ulcers from gastro-enterostomy.

Moynihan believes the most rational of all methods of treatment is that introduced by Sippy, which appears to meet those conditions in the stomach which must be controlled before an ulcer can have a chance to heal. He further states that a really serious attempt to treat all

cases of gastric ulcer by medical treatment should be made.

I quote from Dr. George Crile, in a personal letter to me dated September 24, 1921:

"Medical treatment should be given a thorough trial at first, excepting in the following cases, when surgical intervention should not be delayed:

- "1. Obstruction of the pylorus.
- "2. Marked perigastric adhesions interfering with the emptying of the stomach.
- "3. When medical treatment has been given a thorough trial without any relief of symptoms.
- "4. In case of perforation.
- "5. In the presence of persistent hemorrhage.
- "6. When there is any question regarding the presence of carcinoma, either primary or developed in the site of an old ulcer."

I also asked a distinguished surgeon if, with all the knowledge he had of gastric ulcer and its treatment, he would allow himself to be operated on here for gastric ulcer. He replied, "Not at all. There are only three surgeons in the United States who could operate on me." I then asked him if he would submit to treatment by an internist, using the best medical treatment available, and his reply was in the affirmative. Is not this evidence conclusive?

Surgery has reached its highest point, according to many observers. Internal medicine is just starting, and within the next few years even greater advances may be expected. The Mayo Clinic recognizes this in their installation of 400 beds for internal medical treatment. Our hope is that Indiana surgeons may not be laggard, as the wheels of Progress are continually moving onward.

DR. GEORGE W. McCASKEY (Fort Wayne): In regard to the etiology of gastric ulcer, there are a number of factors, chemical, vascular and others, which affect the continuity of the gastric and duodenal mucosa. I think it has been fully established that traumatism and chemical factors cannot produce a typical clinical ulcer, such as we have to deal with in our patients, and if that be true, what is the ultimate, final cause of the ulcer? My belief is that Rosenow's view of the elective affinity of certain bacteria for the stomach, kidneys and other organs furnishes the most plausible explanation of gastric ulcer. I also believe that the infection is always hematogenous in its approach to the stomach, and that were it not for this hematogenous infection of the stomach we probably would never have a typical clinical ulcer. That may be dogmatic, and of course we must wait for further information and evidence before we can positively decide this question; but that is my personal belief.

The treatment I think should first be medical, and for a long enough time to prove that medical treatment is inefficient. I think it should not be surgical until it has been proven that relief from medical treatment cannot be obtained.

I would like to protest against the too routine performance of gastro-jejunostomy. First, because of the perverted anatomy and physiology which it leaves; second, because of the not infrequent occurrence of jejunal ulcer; third, because in a large number of cases in which jejunal ulcer does not occur, there is persistent jejunal irritation, or possibly erosions which leave the patient symptomatically unimproved; fourth, because it fails to cure many cases, and fifth, because the operative hazard to life, while very small with highly skilful surgeons, increases greatly in the hands of less skilful operators, and cannot be ignored.

In general, it may be said that the results of medical treatment in a very large proportion of cases is quite as good as the surgical, unless extensive induration or threatened malignancy obtains, neither of which is cured by gastro-jejunostomy.

The recurrence of ulcer after medical treatment will become less and less frequent when both the internist and patient do their duty. The former includes the removal of etiologic factors and the careful education of the patient as to his future regime over a period of years. The latter, a strict compliance on the part of the patient with instructions given, with the distinct understanding that the ultimate results depend quite as much upon him as upon the physician.

DR. H. O. PANTZER (Indianapolis): Speaking of the etiology, one factor has not been mentioned which to me seems of great importance. I refer to anatomical irregularities of the stomach and its neighboring organs. They do prevail to a surprising extent. And they do give rise to functional disturbances which go with physical insult, chemical irritation, and infection.

I have for thirty years observed this line of thought incidentally to my surgical work. My first case was reported in 1891, and since that time I have frequently published my further observations and conclusions. I am convinced that anatomical irregularities are the predisposing and primary cause, not only of gastric ulcer, but of all abdominal diseases in a large percent of cases. I have also convinced myself that many of the ills of infant life—now too freely ascribed to impaired mother's milk, and errors in diet—in reality are owing to congenital anatomical irregularities of form and position, and the subsequent disturbances of function.

At first Nature, so to speak, "balks", then creates a temporary tolerance of them, which processes repeat themselves. Later these conditions are recognized as formidable pathological entities, of which gastric ulcer is but a sample. With light touch (as practiced by the blind), with x-ray, and with intensive study of the symptomatology and its causes, we will—I may hope—learn to recognize these conditions in the infant, and then shall operate these conditions early and thus avert long suffering ending in final critical disease, as which alone we now treat them.

DR. W. H. FOREMAN (closing): In regard to the acidity of the stomach, I made the statement that the amount of acidity was of little value in diagnosis because so many other conditions can produce hyperacidity; but that after ulcer has been diagnosed, then the amount of acid in the stomach assumes great importance in the treatment.

The discussion this morning has evidenced the general opinion of the medical profession of the state of Indiana. Two or three years ago if we had discussed a symposium like this the surgeons would have jumped all over us and said that ulcer belongs to the surgeon exclusively. Now the general opinion among the profession is that ulcer belongs to the internist for diagnosis and for early treatment at least, and if it does not respond to treatment, then surgical assistance is necessary. Even after surgery the patient must have as careful medical and dietary treatment as if no surgery had been performed.

What Doctor Porter says may be true. I said in my paper that not all cases are cured, either medically or surgically. I have had cases where the surgeon has operated and the patients have had a recurrence.

DR. J. R. EASTMAN (closing): With relation to Doctor Foreman's statement that two or three years ago the surgeons would have said that every stomach ulcer is a surgical condition, I do not agree with him. Surgeons were hardly so radical as that.

I think Doctor Foxworthy is unduly alarmed at the aggressiveness of the surgeons in this particular field. I do not think the surgeons demand that they be permitted to operate in every case of gastric ulcer. As a rule we do not see these cases until there are perigastric adhesions, hemorrhage and stenosis, and then they are indeed surgical cases. There is a time for medical treatment of gastric or duodenal ulcer, and there is also a time for surgical interference. We must remember the relation of carcinoma of the stomach to ulcer. Every ulcer may become a cancer, and as was said by Dr. William Mayo, every cancer of the stomach was probably at one time an ulcer.

THE PHYSICIAN

"THE REJUVENATION OF MEDICAL ETHICS"*

FRANK B. WYNN

INDIANAPOLIS

Perhaps there is no phase of medicine concerning which there is so much misinformation as concerning the commonly designated "Code of Medical Ethics". Almost without exception, intelligent people know of the existence of a pact amongst decent practitioners, but the knowledge is vague. Some entertain the view that it is a sort of oath; others that it is a traditional custom descended from the ancient fathers in medicine; quite general is the opinion that it is an unwritten law of the profession containing obsolete rules of conduct, neither justified in wisdom nor right, but which long usage makes it impossible to shake off. In the lay press the view is often expressed by innuendo if not by direct words, that "Medical Ethics" is a species of folly characterized by narrowness, not at all in keeping with the spirit of modern progress. By those outside the pale of organized medical forces, this idea is held aloft and painted with ridicule. Should there not be some concerted and forceful effort made to correct these erroneous ideas entertained in the public mind?

How remote these conceptions are from the truth, all know who are familiar with the Principles of Medical Ethics. It represents a most commendable effort on the part of the intelligent and progressive elements of medicine, to conserve the idealism of the medical past. It seeks to elevate the standards of practice and scientific attainment, of gentlemanly and moral conduct, for the benefit of the patient first of all; for the mutual instruction and elevation of the profession; and in the interest of the public weal. Should we ever fall from these high standards, we will no longer be worthy the designation of a profession, but must march in the ranks of tradesmen.

Searching for the causes of public mistrust of the "Code" they are found to exist in ignorance concerning its nature and purposes. Laymen are excusable for these erroneous conceptions and misapprehensions. I never yet have talked to one who had read the Principles of Medical Ethics. His knowledge of it came through hearsay or isolated acts of physicians which he could not understand, and not comprehending the rational and moral grounds for such action, he was likely to consider it queer and senseless. And so very naturally, one might say quite justly, our "Code" has come in for gibes and sneers. Physicians themselves not rarely also show their ignorance of the scope

*Seventeenth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

and purpose of this instrument by falling in with the public judgment and condemning it by faint praise. In truth can the profession as a whole claim that any moving faith animates the rank and file in support of this "Charter of Achievement, Responsibility and Conduct"?

Had not progressive men from time to time in the history of organized medical development, made conscientious effort to formulate "By-laws" or "Principles" as a guide to professional conduct, they would have been most recalcitrant to duty in their day and generation. As well think of the American Commonwealth without a Constitution, a religion without a creed, or the Bible without its Ten Commandments. Our "Code" is not a perfect instrument—never can be. With evolution in medical progress it will need revision to meet the changes which wisdom and experience have proved out, and found not wanting. For the present it will be to our mutual advantage to know better our commandments of "Shalts" and "Shalt-nots".

It is surprising and rather disheartening how few medical men are familiar with the Principles of Medical Ethics. This explains why they do not more frequently come to the defense of its teaching. This is owing in part I believe to the fact of its stilted form. That it is framed by Chapters, Articles and Sections is in conformity with usage in the writing of Constitutions and By-laws. This method has its practical value in enabling one to find quickly certain articles of the instrument. But it is open to the very serious objection that it lacks in readable qualities which hold one's interest and attention. Constitutions are very important in setting forth the aims and rules of action in organizations, but who takes any particular delight in reading them? They possess a sort of stereotyped monotony of mechanism which is repellant to enthusiasm. However fine and fundamental may be the American Constitution, does one gather enthusiasm from perusing its contents, as he does from reading the Declaration of Independence? The former is cold, concise to the point of mathematical exactness, so carefully wrought that not a word can be spared. It is the bulwark of wisdom and far-sight, coming out of the fertile brain of Hamilton, protecting the liberties gained at so great a price, against future calamity. It is utterly devoid, however, of appeal to the imagination or emotions. In contrast to Hamilton's master work, contemplate the immortal instrument penned by Jefferson. It burns with righteous indignation, kindles the flame of patriotic fervor and lights the torch of liberty. Who is not proud of both? One served to arouse the builders of a republic to action and having served the purpose of the day, lives now chiefly

as a beautiful historic sentiment. The other became the permanent foundation upon which the governmental structure of liberty rests.

In our present state of national unrest, following the world-war, millions of unassimilated foreigners upon our shores fail to comprehend the significance of American institutions. The American Constitution, however wise and just, is a cold and meaningless thing to them. Is not the imperative duty of the hour to read into the Constitution the spirit and the fire of the Declaration of Independence in order that they may know the price paid for liberty? When we who have enjoyed these blessings are aroused by a zeal like Paul of old, to proclaim again and again upon every hand, the sacrifices and the spirit out of which and through which our country has grown, there will come to these peoples conviction and conversion. As soon as they are nationally born again they will become fit subjects to live and work under a wise governing Constitution.

By analogy may it not be said of our constitution, "The Code of Medical Ethics," that like the American Constitution, it too needs to have read into it an awakening spirit of medical evangelism—which will renew the faith and arouse to more determined influence and power in medicine. For may it not be true that we have been carried from safe moorings by the world-wide wave of materialism? The captains of industry have occupied the stage of chief interest in our day and generation. Likewise the captains of medicine have marched to material conquest in laboratories, revealing cold facts; along the avenues of specialism, searching for isolated and unemotional truths—all splendid and serviceful achievements taking little account, however, of man as a thinking, feeling organism. In the light of these facts is it not well that we should come to our medical senses, giving proper evaluation to the ethical and moral phases of medicine.

It must be granted that the Principles of Medical Ethics is a remarkable instrument comprehending the very essence of wisdom which should govern the conduct and widen the vision of every right-thinking physician. But a deplorable weakness lies in its cold, stereotyped, constitution-like manner of presentation, which repels rather than invites contemplation. Certainly it has failed to bring conviction to the public mind, which views it with ill-concealed contempt. Nay, even more. There often arises wide-spread suspicion of concerted endeavors of physicians for the common weal. Is it an impending epidemic of small-pox in which general vaccination is urged, the cynical voice of suspicion is raised, charging the medical profession with planning a vaccination harvest. Should unsanitary conditions threaten the health

of the community and a courageous group of physicians take a firm stand for their correction, they may expect slanderous criticism of their motives. And among the opposition will sometimes be found the reactionary physician, who has become myopic to the broader view of Medical Ethics.

But of all the scoffers at the tenets of our medical creed, none equals in numbers or virulence of accusation the quasi-medical sects—the “rubbers” and “healers”. When concerted effort is made by the profession to require of these mushroom practitioners the same fundamental literary and scientific training which accredited physicians must take, they protest furiously, crying persecution and monopoly. Thus have these anti-medical agitators and pseudo-practitioners shouted themselves into a position of prominence in the public mind. So securely established are they that legislatures pay homage in negative conduct regarding reforms, and because of their substantial contributions to the advertising columns of the lay press, the latter gives them a fattening publicity. Stoically we have suppressed our emotions and borne their brazen aggressiveness. The professional brain is dizzy with apprehensive anxiety of what may come to pass.

But let not the intensity of our zeal to punish or restrict the “irregulars” blind us to the existence of our own professional delinquencies. However venal and offensive their acts, has our conduct been above the suspicion of mercenary ambitions? Note the large number of general practitioners entering special fields, frankly confessing the motive is greater ease and larger income. Even the tendency of the time to group practice finds its most frequent argument a desire to augment incomes rather than cooperative study, and productive scientific effort. This statement is borne out by the fact of frequent failures of group efforts, from wreckage upon the rocks of financial controversy. If one would be still further convinced, listen to the casual conversation of a group of medical men in the physicians’ waiting room of a general hospital. The theme of discussion is not so likely to be a recent article of great scientific interest, or the superior investigative work of some struggling young practitioner, but gossip about the volume of work or incomes of supposedly successful specialists.

Too generally the profession has become obsessed with the idea of magnitude, in practice rather than quality of work, or contributions to professional betterment. “Big Business” in medicine, like in the commercial and industrial world, may produce a few medical plutocrats, but its tendency will be to lower the general professional tone, and establish false standards

of practice. It is not in keeping with the ancient traditions of medicine, nor consonant with “The Principles of Medical Ethics” that we should bow down before the Mammon of avarice.

Finally, may it not be contended that sufficient argument has been offered to justify the conclusion that there is urgent need, in these times of medical unrest, for a rejuvenation of “The Principles of Medical Ethics”? Let this instrument be considered not merely an epitome of the laws governing the moral conduct of physicians but a living, moving force to promote the ideals of medical progress. As the Decalogue was to the ancient Hebrews, so let the profession of medicine find light and guidance in a revival of “*The Ten Commandments of Medical Ethics*”.

THE TEN COMMANDMENTS OF MEDICAL ETHICS

I. *Reverence and Responsibility.*

Remember thy Creator in the days of professional youth. Bow reverently before the wonderful human body, sick or well, as thou wouldst before a sacred shrine, conscious of thy high duty; resolved to serve to the best of thy power, whether the patient be black or white, prince or pauper, saint or degenerate.

II. *Historic Appreciation.*

Honor thy father and thy mother. Likewise give praise to the fathers in medicine whose rich heritage of scientific and clinical truth has been handed down to thee through centuries of patient toil. Hold fast to that which is good, but let not prejudice coming out of the past blind thy vision to the newer truths of medical advancement.

III. *Keeping the Faith.*

Thou shalt not worship the graven images of false practice—of avarice and selfishness which eat at the very heart of medical idealism; of clever artifice or brazen quackery which knowingly deceives; of erratic isms and cults which tell but half truths, leading the ignorant and unwary astray.

IV. *Inviolable Confidences.*

Thou shalt not disclose the secrets confided to thy keeping by trusting patients unless they be of criminal or treasonable import. Nor shalt thou abuse the professional intimacy granted to thee by women, which becomes a professional and moral obligation thou shouldst hold inviolate.

V. *The Sanctity of Life.*

Thou shalt not hazard life unwarrantably; neither shalt thou shrink before the obvious perils of duty when life is at stake. The unborn shalt thou not destroy except after due consultation, it is deemed advisable for the larger saving of life. Suffer not death to

come through neglect in care of the sick, nor from failure in reading, study and counsel to gain the greatest benefit for the patient.

VI. *Professional Cooperation.*

Thou shalt not bear false witness against a worthy professional brother, but seek ever to protect his good name from calumnious attack by misinterpreting laymen. Of thy knowledge give him unstintingly, counselling and cooperating for medical progress.

VII. *Gentlemanly Conduct.*

Thou shalt not prate of cases nor countenance unseemly boasting of thy achievements in the lay press. Always a gentleman, let thy conduct be reserved but without cowardice; courteous but free from flattery; dignified but of warm heart; tender in ministration but firm in command; clean of body, speech and mind.

VIII. *Honesty in Business.*

Thou shalt not steal; neither shalt thou make extortionate charges nor deceive by the secret division of fees. As a laborer worthy of hire exact fair compensation but by open methods

and with conscience void of offense toward thy fellow-man.

IX. *Obligation to One's Own.*

Take heed of the morrow for the sake of thine own flesh and blood. Therefore shalt thou keep orderly accounts, collecting from the full-handed just recompense for services rendered. To the poor and the families of deserving colleagues, thou shouldst account it a privilege to render faithful attention.

X. *Personal and Public Service.*

Remember thou art thy brother's keeper—physically in the measures and remedies advised for the prevention, alleviation or healing of disease; spiritually in the cheer thou bringest to heavy hearts and the courage thou givest to halting steps. So walking upright before man, mayest thou shew thyself approved unto God. Thus journeying toward life's end, if not singing with the Psalmist "My cup runneth over," thou wilt at least be sustained by the reflections of "A workman that needeth not be ashamed."

The Season's Greetings to
the Readers of the Journal

from

The Editor and Editorial Staff

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EDITORIALS

BRAIN ABSCESS

At the New Orleans session of the A. M. A., April, 1920, a very interesting paper on the surgical treatment of brain abscesses was presented by Adson of the Mayo Clinic, and the same is reprinted in the Collected Papers of the Mayo Clinic, Volume XII, 1920, just from press.

An interesting feature of the discussion is that the principle causes of pyogenic brain abscesses are middle ear diseases, frontal sinusitis and trauma, with the former predominating. In this connection statistics are quoted in which Heilmann reports a series of 510 cases of brain abscess of otitic origin in which 457 were due to chronic otitis media and 173 to acute otitis media. This is significant evidence that brain abscesses are prone to occur in chronic suppurative conditions and may occur in cases of empyema, osteomyelitis and general septicopyemia as well as in cases of infection of the middle ear and frontal sinus. The abscess may arise from an infected area and extend into the brain by contiguity, such as those following infection of the middle ear or frontal sinus, or it may develop at a distance from its etiologic factor and be a part of a hematogenous or lymphatic infection. In the 26 cases operated at the Mayo Clinic, five were traceable to chronic otitis media, six to frontal sinusitis, two to frontal sinusitis with osteomyelitis, four to injury of the skull, five to chronic empyema, and one each to chronic empyema with septicopyemia, pulmonary tuberculosis, lung abscess and bronchiectasis.

The clinical findings showed the average white cell count for the entire group as sixteen thousand, though in a few instances the leukocyte count was normal. Urinalysis was negative for all but four patients and those showed symptoms of acute nephritis. There was increased intracranial pressure in all. Spinal fluid and blood Wassermann tests were positive in two of the twenty-six cases, and this is considered interesting in that neither of these two patients had any corroborative symptoms of syphilis. The choked disc ranged from one to seven diopeters. A resumé of the findings reveals urinalysis usually negative, a slight leukocytosis, and,

if the abscess is unattended with meningitis or cortical encephalitis, a negative spinal puncture. One-third of the patients studied had choked discs, ranging from one to seven diopeters, one-third had local tenderness over the abscess, and one-half had motor or mental impairment.

The duration of the symptoms varied from three days to three years, and each case followed one of three distinct courses. Sixteen patients had an average duration of symptoms of thirty-two days; four of these were operated on for brain abscess and promptly died. The five who recovered following a drainage of the abscess had an average duration of symptoms of six months; five patients had an average duration of twenty-seven months; two slowly recovered, and three died; two developed secondary infection and encephalitis, and one received an injury which ruptured an old abscess into the ventricle.

According to Adson a brain abscess may pass through three distinct phases: the initiatory, the quiescent, and the terminal. It should be operated on in the quiescent stage, not in the initiatory or terminal, as is frequently done. Of the patients seen at the Mayo Clinic, 16 were in the initiatory stage which did not pass into the quiescent stage. Those who were operated and recovered were treated in the quiescent stage when the immunity was the highest. In the terminal stages patients sometimes recover without operation, but the chances are greater that a secondary infection and death will occur.

In concluding, Adson says:

"1. The four principal etiologic factors in the formation of abscess of the brain are otitic infection, frontal sinusitis, injury to the skull, and hematogenous infection. Brain abscess is usually single, except when it is of hematogenous origin associated with a general pyemia, and then frequently it is multiple.

2. A brain abscess in its course may pass through the initiatory, the quiescent, and the terminal phases. The different stages can be determined more definitely from the history and duration of the complaint than from the physical findings.

3. If the abscess has developed by contiguity it should be explored through the area of infection, but if the abscess is remote from the source of infection, it should be explored and drained through an osteoplastic flap craniotomy.

4. Surgical treatment is of little value in the initiatory or terminal stages, or in the presence of meningitis, but it is of great benefit during the quiescent stage. If there is doubt as to the differential diagnosis of brain tumor and brain abscess in the quiescent stage, it is advisable to explore rather than to perform a decompression operation for intracranial pressure or to wait for terminal symptoms."

INTRAVENOUS MEDICATION

Before now we have had something to say concerning intravenous medication other than that included in the intravenous injection of arsphenamin or neo-arsphenamin, and in view of numerous letters of inquiry from readers concerning intravenous medication proposed by certain doctors who exploit dangerous methods of treatment and extol the virtues of drug compounds of secret composition, we feel justified in again calling attention to the subject.

Intravenous medication, as pointed out by the *Journal of the A. M. A.*, no matter what is used, is more or less dangerous. It should not be undertaken except under painstaking technique by one who has had training and experience in that class of work. Furthermore, the product injected should be definitely known as to composition and purity, and its effect also known as a direct result of experimental work by competent and trustworthy clinicians. At the present time a number of firms, as well as individuals, are advertising by circulars, and otherwise, various kinds of intravenous medication, and in practically every instance the firm or the individual exploiting such treatment is not one that through established reputation or experience in using the procedure or preparation recommended can be considered entirely trustworthy. Aside from this the preparation exploited is generally one of secret composition, and that of itself is sufficient to condemn it.

As a further contribution to our condemnation of certain forms of intravenous medication we herewith reproduce our answer to a letter of inquiry:

November 22, 1921.

— — — — —, M.D.,
DEAR DOCTOR:

Answering your letter of November 19 will say that we condemn all kinds of intravenous injections, or for that matter the prescribing in any way, of preparations of secret composition. Löffler's Intravenous Compound is included.

Many varieties of fakes and many species of quackery are offered to members of the medical profession for adoption and use. The really conscientious and ethical physician will refuse to use anything that is offered him unless proof of its value can be secured from a trustworthy source. The Council on Pharmacy and Chemistry of the A. M. A. is doing a wonderful work in placing its stamp of approval or disapproval on medical preparations or practices that are offered to the medical profession for adoption and use. You can not go wrong by following the advice or suggestions of that body. Every month we print a résumé of the work of the Council, and yet we know that some of our readers are conceited enough or ignorant enough to think that their judgment is superior to the judgment of some forty or fifty of the most eminent and qualified physicians in the medical profession.

Among the men exposed by the Council as quacks is Dr. Löffler, and among the fake preparations exposed is Löffler's Intravenous Compound. It would seem that any doctor who has any sense of honesty or cares to maintain a reputation for professional

ability would refuse to have anything to do with Löffler's Intravenous Compound. However, it is quite possible that some doctors like to be humbugged, though it is more reasonable to suppose that some doctors, while not being humbugged themselves, are using a humbug to humbug their patients, and all for the sake of pecuniary gain!

Sincerely yours,

THE JOURNAL OF THE
INDIANA STATE MEDICAL ASSOCIATION.
By Albert E. Bulson, Jr.,
Editor and Manager.

RADIUM TREATMENT OF CANCER

In an editorial in the November issue of *THE JOURNAL* we quoted Deaver's recent statement to the effect that radium treatment of cancer has been disappointing and that he doubted if radium had produced *any* beneficial effect in the treatment of cancer. We questioned the truth of the statement, and called attention to the fact that while it may be that radium is not proving as valuable in the treatment of cancer as some have believed, yet it will take more than the conclusion of one man, no matter how eminent, to change the opinions of many serious workers and hundreds of cured patients concerning the effect of radium in the treatment of cancer. We now have a communication from Dr. Charles Goosmann, of Cincinnati, in which it is pointed out that Dr. Deaver evidently was referring to deep cancers, as the curative value of radium in skin cancers is everywhere acknowledged. In further discussion of the subject Dr. Goosmann says:

For a good many years it has been conceded that radiotherapy held out the only hope in inoperable cancer of the uterus. I have two cases that are well for 4 1/3 years and 1 3/4 years, respectively. Both had an exploratory laparotomy, but were too far advanced for any surgical treatment. In the one case the result was so good that a physician who saw the patient after the treatment declared there had been no cancer. A section of the tumor, however, had been retained.

In more recent times it has been conceded that the so-called border-line cases do better with radiation treatment than with surgery. The question today is whether, in early and operable cases, radiotherapy can give a larger percentage of permanent cures than operation. I believe this can be definitely answered in the affirmative. It must be borne in mind that removal of the uterus, followed by radium treatment, is not so satisfactory because

1. The intra-uterine application of radium permits much larger doses than can be tolerated in the vagina.

2. Radium inside the uterus is placed at about the center of the pelvis and therefore can reach the deep structures better.

3. It is an open question whether removal of the uterus does not frequently scatter the cancer cells throughout the pelvis.

Radiotherapists for some years have been very conservative in their statements. In fact, most of the published claims for this form of treatment in operable cases have been made by surgeons, who have taken it up. Here there could be no claim of prejudice, since obviously, they could take it or leave it alone, and the results had to be very encouraging to

overcome that trait of humanity which "makes us rather bear those ills we have, than fly to others that we know not of". It would be strange if a treatment that cured even one advanced and inoperable case could not succeed a good deal better with early cases.

Recasens¹ of Madrid has treated over 400 cancers of the cervix uteri with radiation in the past seven years, and believes that radium plus x-ray is undoubtedly superior to any other method of treatment.

Heyman² of Stockholm, Sweden, considers 20 percent a liberal estimate of *operative* cures. He has 66 cases treated with radiotherapy, of which 28.8 percent have been well for five years. All of these were inoperable except seven, of which number five (44 percent) are well.

Opitz³ of Freiburg, Germany, judging from the literature and his own results, which are constantly improving, feels convinced that uterine cancer can be permanently cured with radiation alone, and probably in a larger percentage than with operation. He, therefore, does not operate them any more.

Seitz⁴ of Erlangen, Germany, after discussing his results, says: "It is, therefore, comprehensible that we have come to the conclusion, at first hesitatingly, but now with more assurance, to treat all uterine cancers with radiotherapy, either radium and x-ray combined, or the new method of x-ray alone." (He does not believe radium alone quite so satisfactory.)

That these opinions are not confined to foreign observers can be easily shown. Ransohoff⁵ was one of the first to emphasize the advantages of radium treatment as compared with operation, in early cancer of the cervix. Recently Duncan⁶, Barrow and Frank⁷ and Clark and Keene⁸ have expressed similar opinions. All but one of these American writers are surgeons; only one of them is primarily a radium therapist. I will quote from Clark and Keene: "In comparing the vast outlay of surgical effort put forth in the latter class of cases with the great dangers attending the radical operation, as to both mortality and disabling results, we feel convinced that the time has about, if not quite, arrived when we shall cease to speak of any operable cases of cancer of the cervix, but shall submit them all to irradiation. Certainly our results have led us convincingly in this direction. As the palliative results have been so excellent and, as our statistics now appear, the actual cures have been so relatively large in the hopeless cases, it would appear illogical to submit the early operable cases to the great dangers of surgical intervention and reserve only the inoperable case for irradiation. While we still discuss operability, we are turning to this method of procedure in such a small minority of cases in our clinic as to carry our statistics in this line almost to the vanishing point."

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SOCIALIZING MEDICINE

[*Bulletin of the Wayne County (Detroit) Medical Society*]

A member of the Legislative Committee of the Michigan State Medical Society has the following to say concerning efforts that are being put forth to socialize the practice of medicine:

"If we are fighting today with our backs to the wall to prevent the socialization of medicine and the degradation of the individual, it is because in our race for bigness, we have permitted our moral and intellectual clearness to be befogged. As individual practitioners of medicine, we have boasted of our great national organization and its great Journal. We took pride in the fact that the A. M. A. was worth almost a million dollars in quick assets, and that the income of its Journal was reaching toward that princely sum of one million dollars for one year's income. We bragged that our association numbered its members by the thousand, but we forget to ask Huxley's pertinent question, 'What have we done with it?'

"When we cast up accounts, our pride is due for a hard fall.

"We have permitted our great national organization to become the plaything of 'paper philosophers', men too rich or too tired, or too lazy, or too ambitious to tread the thorny path of the practice of medicine; men who prefer the job of telling us what to do, to doing it themselves; men who chafe at the long, tedious apprenticeship of the physician and surgeon but prefer short cuts to positions under various names; men whose sole aim is to sit on a throne, directing and controlling a horde of medical slaves who are to do all the work, take all the responsibility, but to pass up the rewards. And all of this has happened, because we have been too busy growing big to be sure that we were growing just. We gave these men power and, like Oliver Twist, they wanted more. It is a human failing, for all men are potential despots at heart.

"We have seen our good money paid out in salary to an avowed apostle of Compulsory Health Insurance by the Council on Health and Public Instruction of the A. M. A., at the bidding of a chairman who was a shining light in the councils of the American Association for Labor Legislation, sponsors for the socialization of medicine. And we were asked to accept the report of this apostle and his brother of the A. A. L. L. as being disinterested.

"This year, we were treated to the spectacle of a leader of the A. M. A., a gentleman who for years has been a power in shaping the policies of the A. M. A. and its Journal, appearing before the House of Delegates to repudiate a speech, favoring Compulsory Health Insurance, which he had made some time ago and which

had been printed in the *Journal of the American Association for Labor Legislation*. He did not claim that he had not been fairly reported, but now that he was a candidate for re-election as Trustee, and the A. M. A. had gone squarely on record as opposed to Compulsory Health Insurance, he wanted to take it all back. A man has a right to change his mind, but to the disinterested observer that change would have been in the better taste if announced at a time when the candidate was not looking for votes.

"And to add to the strangeness of the situation, we found men who were openly favoring 'State Medicine' on the score that it means bread and butter to them, jumping in to back up this candidate who was recanting the very opinions his backers were favoring. These Public Health Officials waxed indignant as they denounced the men who had brought out this speech of the candidate's in favoring socialization. They called upon the House of Delegates to try them for treason and to boil them in oil if necessary. And what had these men done who were being thus roundly abused? They were simply trying to find out whom this candidate would represent, if elected. He had preached Compulsory Health Insurance in the A. A. L. L. Journal and the question of moment was, will this candidate, if elected, represent an interlocking directorate of the American Association for Labor Legislation and the A. M. A., or will he represent the overwhelming majority of the medical profession who are opposed to the measures for which the socializers of medicine stand? The candidate was elected after a hard fight. Time will tell, but vigilance alone will be the price of knowledge.

"We have lived to see Johns Hopkins fix a fee for a week's care by a physician at \$35, a salary which many a taxi driver will scorn. All these things we have seen, and the question is, what are we going to do about it? That no man shall be able to plead ignorance of existing conditions is the purpose of the BULLETIN. The profession must fight. If necessary, take a beating and fight again. Our socializers hope to tire us out, but once we drive them into the open, take from them their brazen shields of wealth, position and reputation, behind which they are hiding, then and only then, will the overwhelming majority who pay the freight come into their own again and the A. M. A. represent the physicians of this country and not be the mouthpiece of our 'Paper Philosophers'."

DRIFT TO SOCIALISM

Now that the Sheppard-Towner maternity—so-called—bill is a law by virtue of the President's signature, the American people would do well to ask themselves whether the swing to socialism has not gone quite far enough, and whether it should not be stopped. The bill in question is thoroughly bad. But it is now a law, so there is no call for a further discussion of it. Its effects, or non-effects, will be carefully watched. There will be great pressure on the legislatures of the states to appropriate large sums of money in order that they may get some of the money to be appropriated by the federal government. Such a partnership is dangerous, and fraught with great possibilities of evil.

But the broader question is whether our people are to take care of themselves or be taken care of by the government; whether they are to manage their own affairs, or permit the government to do so; whether they are to be the independent, individualistic, resourceful people they used to be, or mere wards of the central authority. The issues are weighty, involving as they do both the character of our government and institutions, and of our people. Every scheme of governmental aid ought to be viewed with grave suspicion, for all such schemes involve fundamental political principles.

So it is suggested that the American people should, if they would preserve their liberties, look to themselves and their government, and resolve that they will not tolerate in the future any policy that is inconsistent with the spirit of American institutions, or with the principles on which they rest. The tendency toward socialism is strong and the appeal of socialism is evidently most alluring to many of our people. This is shown by the character of our tax legislation, tariff policies, and class legislation of various sorts. There is no danger to be apprehended from Socialists as such, but there is real peril in socialism, which is making great strides, though it is not by many understood to be socialism.—*Indianapolis News*, Nov. 24, 1921.

THE LORENZ FIASCO

A few weeks ago Professor Lorenz, the famous Vienna orthopedic surgeon, who made quite a reputation and a very large fee for himself about twenty years ago by treating the daughter of P. D. Armour, of Chicago, landed in this country and announced that he had come here to repay a debt to America by offering his services gratuitously to the crippled children of America. He announced that he would hold clinics in the various cities of the country, and

he began his work in New York where hundreds and perhaps thousands of crippled children besieged the hospital where he was working in response to the advertising of the plans as given in the daily press. As we pen this editorial we learn that Professor Lorenz has abandoned his plan to continue clinics in this country, and all because his work has not received the sanction of some of the leading medical men of America. As to be expected, some of the lay publications are condemning the medical profession of the United States for having opposed Professor Lorenz, or perhaps for not having encouraged him in his work.

A little analysis of the facts pertaining to this episode may clear the atmosphere somewhat and show that Professor Lorenz is not wholly altruistic in his motives. When he came here over twenty years ago for the purpose of treating the Armour girl he probably was one of the best orthopedic surgeons in the world, he conducted himself in an ethical manner, his visit here was not opposed, and he was given a cordial welcome by medical men wherever he went. In fact he was given the opportunity of not only demonstrating some of his own orthopedic methods but he courteously was placed in a position where he could make thousands of dollars in this country by treating cases in some of our wealthy families. Since that visit orthopedic as well as all other surgery in the United States has made great advances, in fact now leads the world, and at the present time there are several surgeons in New York, as well as surgeons in every large city in the United States, who can do anything that Professor Lorenz can do. They not only are capable of doing bloodless surgery as well as it is done by Professor Lorenz but they are as willing to do it gratuitously for America's worthy poor. They are doing it daily in all of our large clinics, but they are not doing it with a blare of trumpets nor are they asking that their work be heralded through the metropolitan dailies as miraculous or even unusual. In fact it would be exceedingly distasteful to them were they to be advertised in the daily papers and in the moving pictures as Professor Lorenz was advertised.

It is the height of absurdity for anyone to think that Professor Lorenz is in this country because he so loves the American people that he wants to repay any debt of gratitude that he or his countrymen may owe. We feel satisfied that few if any Austrians consider that they owe us anything in gratitude or in money. They despised us for going into the war, and they attribute their defeat to the fact that we finally did go to the assistance of their enemies. Deep in his heart Professor Lorenz entertains no better feeling for us than the rest of his country-

men, even though now, with the war over and his purse depleted, he is quite willing to assume a suave demeanor and cultivate our friendship for the dollars to be gained thereby. Professor Lorenz knows that the crippled children of Austria, and particularly in his own city of Vienna, need his services right now far more than do the crippled children of America, and if he really possessed the altruistic motives in furnishing his services gratuitously he would be at home where he is so sorely needed, rather than in America where he is not needed and where the work that he has been doing can well be carried on by American surgeons who are as competent as he. The truth of the matter is that Professor Lorenz came to this country to recoup his fortunes, and he knew that he could depend upon the public press to advertise him well if he came in the name of charity. He knew that the advertising received would bring to him not alone the worthy poor but the rich as well, and that the latter would afford him princely fees for services rendered. Therefore the American surgeons in New York, Philadelphia, St. Louis and Chicago, who are reported to have been opposed to the Lorenz clinics in this country, have just reason for presenting a cold shoulder to such spectacular performances undoubtedly designed and carried out for personal gain.

There is no occasion for the deserving poor being uncared for in this country. There isn't a reputable surgeon in America who doesn't do a great deal of charity work and who is not willing to do a great deal more if approached in the proper manner for the services. Aside from this there are hundreds of well trained young medical men in all of our large cities who consider themselves most fortunate if they are able to gain experience by caring for the deserving poor who may apply in person at the clinics for aid or who may be brought there by the various organizations connected with social service. The great trouble is that our social service in the cities is not developed nor managed as it should be, and in consequence our medical men are imposed upon by the well-to-do, and communities are pauperized by the bestowal of gratuitous medical and surgical services upon the unworthy who do not hesitate to take advantage of it when the really needy hesitate about asking for such help. However, there are competent surgeons in New York who are doing as much and as good charity work as Professor Lorenz attempted to do, and they neither ask nor covet the advertising that has been given Professor Lorenz. When they do this day in and day out in an ethical and modest manner, is it any wonder that they do not look with favor upon the Lorenz fiasco?

DEATH OF DR. KIMBERLIN

As we go to press we learn of the tragic death of Dr. A. C. Kimberlin, of Indianapolis, which occurred accidentally, on December 14, while he was on a hunting trip in southern Indiana.

Perhaps no man in the medical profession of Indiana has been more loved and honored by his confreres than Dr. Kimberlin. He was president of the Indiana State Medical Association in 1913, and in making the announcement at that time we called attention to the fact that Dr. Kimberlin's career represents in a striking manner the romance of American life. Leaving the farm when a mere youth because he was dissatisfied with the opportunities it afforded for his future, he went to Indianapolis without capital other than sturdy parentage, a healthy body, a common school education, and a determination to succeed. A three years' course in the Indiana Medical College and one year's internship at the Indianapolis City Hospital constituted his immediate educational equipment for the practice of medicine, but with him, as with every other man who succeeds in medicine, the real school began when he left college and the hospital and began the practice of his profession. He was an indefatigable student and keen observer. His frequent attendance at clinics both in this country and abroad, his deeper interest in the success of the Indianapolis Medical Society, of which he had been both president and secretary, was inspired largely by a desire to become informed of the advances in scientific medicine. Although occupied by the exacting duties of a large private practice, Dr. Kimberlin devoted a great deal of his time to the teaching of medicine, and at all times was deeply interested in the success of the Medical Department of the Indiana University in which institution he held the chair of clinical professor of medicine. In addition to his official activities already mentioned he found time to serve upon the Indianapolis City Board of Health, to be actively identified with all of the prominent medical associations of local and national character, and for over twenty years was on the clinical staff of the Indianapolis City Hospital. In recent years he turned his attention exclusively to the subject of internal medicine, and he established for himself a reputation as a careful, painstaking and competent clinician and consultant. Probably no medical man in Indiana has been more loved by his confreres, for coupled with a pleasing personality he exhibited a sympathetic interest in the welfare of his associates, and at all times a sterling character so much admired among all men. His untimely death at fifty-eight years of age is a shock to all who knew him, and the medical profession of Indiana has lost one of its truly great men.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

To all our readers: A Merry Christmas and a Happy New Year!

LOST—Dr. Luke P. V. Williams of Greenwood is searching for a pair of twin boys, Lester and Chester Ford, seventeen years of age, who have disappeared from their home. Any information concerning their whereabouts will be gratefully received.

EACH one of our readers should read the department in THE JOURNAL devoted to Propaganda and Reform. In it will be found much valuable information concerning not only reliable and trustworthy preparations, but fake and near-fake remedies as well.

It may not be out of place to call attention to the fact that those who fail to pay their medical society dues on or before February 1 are delinquent, and cannot receive the benefits of the Association and especially the protection afforded by Medical Defense. Why wait until the last minute and thus run the risk of being penalized unnecessarily?

WE know that the county medical society secretaries now are trying to collect dues for the coming year. Why not surprise your secretary by sending in your dues without being solicited? You know that your dues should be paid on or before January 1, so why not pay them now? It will save your secretary work, and his job is a thankless one anyway.

HERETOFORE there has been some complaint that some county medical society secretaries do not send dues to the Secretary of the State Medical Association as promptly as they should. This means that some members may become delinquent through no fault of their own. Members of county medical societies should remember that the county secretary, chosen by themselves, is their own representative, and the State

Association cannot be held responsible for dereliction of duty on the part of the county medical society secretary.

THE membership list of the Association, by counties, is published in this number of *THE JOURNAL*. In some instances members who are credited with membership in a county medical society are non-residents, but as far as possible the post office address is given with the name. The list has been checked by Secretary Combs and therefore ought to be correct. Incidentally it forms a part of the mailing list for *THE JOURNAL* and if any members desire corrections made they are requested to notify the editor of *THE JOURNAL* to that effect.

DOCTORS, lend your support and assistance to the Fourteenth Annual Christmas Seal Sale. What is it accomplishing? Listen: It is saving 75,000 lives a year. It is providing hospital care for 100,000 tuberculosis patients a year. Nearly 75,000 children are being restored to health in open air schools. Over 5,000,000 calls a year are being made by 5,000 public health nurses. Practically all of our 110,000,000 Americans are being educated to better health. About 7,000,000 school children are learning correct health habits through the Modern Health Crusade.

ONE or two new chiropractic colleges have been started in Fort Wayne, and they now are so numerous in that city that it is hard to keep track of them. The number is not exactly known as we have had no official reports during the last forty-eight hours. Incidentally, it is known that the chiropractic signs in the city of Fort Wayne far outnumber the signs of all real doctors put together, but the latest accounts indicate that the real doctors are doing as much work as ever before. It is a known fact that the chiropractors are warring among themselves, and one suit by some of the students threatens to close up one of the chiropractic schools. Perhaps if they are let alone they will "hang themselves with their own rope".

CHRISTMAS seal your Christmas mail! Since 1908, when the first annual Red Cross Christmas seal sale was inaugurated, the national, state and local tuberculosis associations have been constantly reducing the death rate from tuberculosis which, at that time, was nearly 200 for every 100,000 population. Now—1921—this human loss has been reduced to approximately 125 for every 100,000 people, a saving of 75,000 lives annually. The use of Christmas seals on your mail, (1) helps provide care and treatment

for those who have the disease: (2) helps prevent those who are infected with it from breaking down with active tuberculosis; (3) helps control the spread of infection from those who have it to those who do not have it. Christmas seal your Christmas mail!

THE chiropractors are getting so thick, and the "business" that goes to chiropractors has to be spread out so thin in view of the numbers of those who grab for it, that it has become necessary to make personal solicitations for work among those reported as sick or disabled from any cause. Soliciting "business" by letters, and even by telephone calls, is not at all unusual, and we have heard of one afflicted family that received several letters from as many different chiropractors asking for the privilege of making "adjustments" with a view of accomplishing a cure. The pathetic feature of this whole nauseating business is that the ignorant and the poor for the most part are the ones that are deluded and swindled, and they are the ones who can least afford it.

WE desire to call the attention of our readers to an advertisement which appeared in the November number of *THE JOURNAL* in which a well known pharmaceutical house say in their advertising "Prescribe Council Passed Products", meaning of course that physicians who are wise will use only those pharmaceutical specialties that have been examined and approved by the Council on Pharmacy and Chemistry of the A. M. A. That is the right kind of talk, and we are especially pleased to note that the more progressive manufacturers of pharmaceutical specialties and biological products are coming to the conclusion that not only is the Council an excellent body of clinicians and investigators whose approval is worth securing, but that the rank and file of the medical profession will be wise if the Council's findings are heeded.

THE Sheppard-Towner bill in its amended form has passed Congress and been signed by the President. Therefore it is now a law of the land. It appropriates a large sum of money, a good portion of which is devoted to administration expenses. Nothing is provided for the care or treatment of the maternity case, in reality the one that the bill was supposed to aid and protect. It was opposed by an almost united medical profession, by many women's clubs, and by many civic organizations. In the main it is a "pork barrel" measure, and the functioning which the bill provides for is placed in the hands of a committee the majority of whom are laymen. Unquestionably the bill as passed provides for a wasteful expenditure of money without adequate return, and to top the whole thing off

its operation is not placed in the hands of the Public Health Service where it belongs. Could anything be more demonstrative of what politics will do?

THE *British Medical Journal*, in launching a campaign to better the personnel of the medical profession, makes the statement that "No one should think of entering this profession who is unprepared to spend \$75,000 on his medical education". Is it possible that England has not heard of chiropractic for the cure of all diseases and ailments, from cancer to chicken-pox, the science of which can be learned in from three to six months, at a cost not to exceed \$100! Why spend \$75,000! England indeed is "behind the times" if she still believes in long medical courses covering physiology, anatomy, bacteriology, histology, pathology, etc., etc., when such knowledge is entirely superfluous, and all that is necessary is a little exercise and training of the fingers to "manipulate" the vertebrae for the cure of any and all diseased conditions! Someone should advise the *British Medical Journal* of its terrible error in making such a statement!

NEVER before have doctors as well as others been importuned so much and so strongly to invest earnings in questionable enterprises ranging all the way from certificates of stock in imaginary oil wells to promotion stocks in industrial enterprises. A good rule to follow is the one promulgated by Better Business Bureaus everywhere that say "Before you invest, investigate". The best and only way to test out an investment is to measure it according to the standards of safety. Take nothing for granted. Check up or prove what the salesman tells you. Remember that safety of principal is the first consideration, and big returns are seldom secured from enterprises whose stock is peddled. Remember that the safest investments are those that return a moderate income. A safe rule to follow in case one hasn't the time to investigate thoroughly the proposition that is offered is to ask your banker if he will recommend the buying of the stock that is offered. Your banker may be one of the "suckers" that occasionally bite a well-baited though treacherous hook, but he seldom if ever will advise a client to do anything other than pursue a perfectly safe course.

FORT WAYNE seems to be a fertile field for the establishment of chiropractic colleges. Within the last few months several new chiropractic schools have blossomed out, the exact number not being known as we haven't received the returns during the last day or so. Already graduates of schools that have been in existence

only a few weeks are flaunting their diplomas and soliciting "business" with a persistence that would do credit to a fake mining stock salesman. Incidentally these chiropractic schools are about to deprive the public of some reasonably good janitors, barbers, and even common street laborers, many of whom are looking forward to the time when they can make "easy money" through chiropractic "adjustments" the knowledge of which can be obtained in a few weeks of indifferent training. Even the elevator boy in one of the local hospitals in Fort Wayne, scarcely out of short trousers, and never having gone beyond the ward schools, proudly volunteered the information that in six weeks he would be a "chiropractic doctor", and then would not have to run an elevator. However, we predict that chiropractic, which has gone up like a sky rocket, will come down like the stick. Anything so idiotic as chiropractic is not going to last, but the trouble of it is that when chiropractic goes, something equally as idiotic and inconsistent will spring up to take its place. Thus the need of restrictive legislation to protect the people from such fakes.

The annual meeting of the Indiana Academy of Ophthalmology and Otolaryngology will be held at the Claypool Hotel, Indianapolis, January 18, 1922. Following is the program:

MORNING SESSION

9:00 A. M.

Parlor B—Claypool Hotel

1. Secretary-Treasurer's Report.
2. Committee Reports.
3. New Instruments.
4. Case Report—DR. C. J. ADAMS, Kokomo.
5. Case Report—DR. J. W. CARMACK, Indianapolis.
6. Comparative Anatomy of the Eye. Gross Pathology. Illustrated by Mounts.—DR. GEORGE F. KEIPER, Lafayette.
7. Election of Officers.

AFTERNOON SESSION

1:30 P. M.

Parlor B—Claypool Hotel

1. President's Address.
2. Lip Reading for Hard of Hearing Adults. By Invitation.—MISS GERTRUDE TORREY, Chicago.
3. Subjective and Objective Nasal Symptoms—W. A. HOLLIS, Hartford City.
4. Hereditary Sub-Luxation of the Crystalline Lens.—DR. F. MCKAY RUBY, Union City.
5. Persistence of the Embryonic Fibro-Vascular Sheath of the Lens. Illustrated by Lantern Slides.—DR. E. J. LENT, South Bend.
6. Toti Mosher Operations on the Tear Sac—DR. J. F. BARNHILL, Indianapolis.

EVENING SESSION

Dinner.

Speaker—DR. HARRY POLLOCK, Chicago.

Subject: "High Spots in Otolaryngology."

A NEW YORK doctor possessing a rather unsavory ethical reputation is getting a lot of free newspaper advertising by giving out interviews concerning his removal of tonsils by the use of x-rays. Incidentally it may be mentioned that some of the most noted clinicians, whose opinions are respected by the medical profession, have tried x-ray therapy for enlarged tonsils and found the treatment disappointing and in a few instances positively harmful. There was a time when the high frequency electrical current was recommended by various enthusiasts as very valuable in the treatment of everything from appendicitis to ingrowing toenails, not omitting enlarged tonsils, and while the high frequency current no doubt is very beneficial in a limited field yet we seldom hear of it any more. X-ray therapy, and still later radium therapy, has been going through similar processes, being heralded by enthusiasts as applicable in a very large variety of diseases and abnormal conditions, but eventually may be found to have but a limited sphere of usefulness. Both radium and the x-ray are now doubted as being efficacious in anything more than a very limited number of malignant conditions, and quite recently Dr. Deaver, the well known Philadelphia surgeon, has felt called upon to say that he doubts if radium ever has produced any proven beneficial results in the cure of malignancy. However, x-ray and radium therapy will reach their proper status before long, like everything else that is tried as a curative agent, and let us hope that they will be found valuable in the treatment of some diseases or abnormal conditions even if they fail to remove tonsils.

OUR readers may know that the Walker Pharmacal Company is exploiting a proprietary preparation of secret formula called "Hymosa" as a remedy for acute and chronic rheumatism. In the circulars being sent to Indiana physicians are two testimonials, one by Dr. F. A. Sauer, Baltimore, Maryland, and we are unable to find such a name in the A. M. A. directory. That is about how most testimonials turn out when investigated.

Irrespective of the irrational and unscientific practice of prescribing proprietary remedies of secret composition we desire to call the attention of our readers to the fact that the Walker Pharmacal Company is the one that has been guilty of fraudulent claims concerning the virtues of several preparations, notably "Succus Cineraria Maritima," advertised as a remedy for absorbing various forms of cataract. This is the preparation that the government analyzed and afterwards made a report concerning it in which it was stated that the claims made for it "were false and fraudulent in that the same were applied to the article knowingly and in reckless

and wanton disregard of their truth or falsity." The company entered a plea of guilty and was fined, but still they continue making similar claims to the medical profession and public. As we stated in THE JOURNAL, December, 1920, "Two things are quite evident to us: first, that the federal punishment was not sufficiently severe and should be repeated in such force that future activities will be found too expensive; second, that there are enough doctors of the credulous type who support these frauds so well that the exploiters can afford to pay a federal fine occasionally and still be ahead of the game."

As a memorial to James Whitcomb Riley nothing could be more fitting than the establishment by Indiana people of a hospital for children. The only objectionable feature in connection with the plan proposed is that covered by the provision made by the last Indiana legislature authorizing the establishment and maintenance of such a hospital providing that *all* (italics ours) of the children of the State of Indiana who need medical attention *may* (italics ours) be admitted *without cost* (italics ours) to them as rapidly as facilities will permit. The law even says that the children whose relatives are able to pay for the care at the hospital may do so, but this is not compulsory. The State is to provide funds for equipment and an annual appropriation for operation, thus assuring funds for permanent maintenance. All of the property will be owned by the State of Indiana. Already the State has provided fifty thousand dollars a year for operative expenses, but the James Whitcomb Riley Memorial Association has pledged itself to raise a million dollars for the purchase of grounds and erection of buildings. It is hoped that the feature of the law which says that all of the children of the State who need medical attention *may* be admitted without cost, etc., shall be construed in such a way that the *indigent* children shall be the only ones admitted as free patients. All others should pay according to their means, for there is no reason why the State should pauperize the community. No finer tribute to Riley could be offered than the establishment of a children's hospital, and such an institution is needed for the purpose of giving appropriate attention to the crippled and sick poor children of the State. However, there is no need of making a charitable institution, for which there is urgent need, a place where the well-to-do can go for the purpose of avoiding the payment of just fees for attention and care.

THE following excerpts from letters written after the publication in the *Woman's Home Companion* of Ernest Harold Bayne's unbiased

opinion on vivisection are sufficiently condemnatory to make the average person appreciate the dishonesty of the anti-vivisectionists, and the fallacies of their claims:

The trouble with the anti-vivisectionists is that they are not only dishonest but wilfully dishonest. They picked out one sentence from a paragraph in my address, "In the Time of Henry Jacob Bigelow," given before the Boston Surgical Society in Boston, on June 6th, and exploited it for their purposes, ignoring the fact that the impression they produced was quite contradictory to the views expressed. The truth is not in these people.—W. J. MAYO, Rochester, Minnesota.

What animal experimentation has accomplished for the benefit of mankind may be inferred from the list of diseases which are no longer the destroyers and terrors that they were: Smallpox, cholera, typhus fever, typhoid fever, puerperal fever, yellow fever, cerebro-spinal meningitis, diphtheria, hook-worm disease, and malaria. All these diseases would have remained the terrible scourges they used to be, were it not for animal experimentation, and the progress in curative and preventive medicine which it has made possible.—CHARLES W. ELIOT, President Emeritus of Harvard University.

I am glad that you brought out the fact that those who are opposed to vivisection are constantly resorting to falsehood to support their case. It is a weak cause, indeed, which demands the desertion of moral principles for its presentation and defense.—C. P. TIVNAN, S. J., President Fordham University.

Animal experimentation is of the highest importance to the welfare of the livestock industry, and thus, indirectly, as well as directly, in its relation to our knowledge of human diseases, of very great importance to the welfare of humanity. * * * In the light of my knowledge of what animal experimentation means to human welfare, I can say, without extravagance, that most terrible consequences would inevitably follow upon the general adoption throughout the world of the program of prohibition and regulation of, and interference with, animal experimentation that is advocated by the opponents of this fundamentally important means of the scientific investigation of disease.—J. R. MOHLER, Chief of Bureau of Animal Industry of the U. S. Dept. of Agriculture.

COMPULSORY Health Insurance, State Medicine, Venereal and other free clinics, and many other social uplift schemes requiring the energy and thought of the members of the medical profession are but stepping stones to socialistic medicine, which not only puts individual incentive and practice out of commission but will place the whole public under the rule of inefficiency. Perhaps we hear someone say, "Well, what is to be done?" to which we answer, in the words of the *Illinois Medical Journal*, "quit giving approval to these various cross-eyed medical uplift schemes advocated by erstwhile reformers and public welfare peddlers who usually see in their schemes some avenue for profit." Some of our medical men who have acquired wealth and social position seem to think that it is quite the proper thing to approve of these various uplift schemes in order to bask in the sunshine of the mighty, forgetting that, in the security of their own economical position, they

are tramping upon the toes of their less fortunate brethren. In reality this "dear public" and "love of humanity" stuff is greatly overworked. The practice of medicine is a vocation, the following of which should be as much entitled to decent remuneration and consideration as any other vocation. It is as deserving of as much consideration as that of plumbing or bricklaying, but usually receives less. The difference between members of the medical profession and members of the plumbing and bricklaying crafts is that the former has no standing commercially or politically and is unable to secure any consideration in its demands for right or justice, whereas the latter through their unity of purpose and insistent demands for recognition secure what they are after and overthrow everything in opposition to it. What we need is a little more brotherly feeling for each other, and a little more consideration for our co-workers, and when we are looking out for the purely selfish interests of the members of the medical profession in adding to their welfare we also are adding to the welfare of the public, which is served by the medical profession.

THE necessity of adequate preparation and the folly of trying to present a subject extemporaneously, as applied to the average speaker, was never more forcefully demonstrated than at the postgraduate course given in connection with the recent or Philadelphia session of the Academy of Ophthalmology and Otolaryngology, when each man on the program was given a specific time for the presentation of his subject in a comprehensive manner and curtly informed that any additional time granted him would be at the expense of the next speaker. While many of the speakers had prepared their work in the form of a written address or carefully prepared notes, and due regard paid to conciseness of statement and avoidance of repetition and the addition of irrelevant subjects, a few of the speakers lamentably failed because they had not prepared themselves suitably and did not conform to the first principles of good public speaking. Iteration and reiteration, too much attention paid to inconsequential and irrelevant things, and perhaps a slow, hesitating delivery occasionally spoiled what should have been a profitable hour for the hearers. In a few instances some very instructive lantern slides or very creditable demonstrations were held until the last, only to be rushed through or omitted altogether on account of lack of time.

There are altogether too many men trying to present addresses or talk before medical societies without adequate preparation, and without any idea as to how or in what manner the subject is to be presented. The good extemporaneous speaker is an exception, and a carefully

prepared paper or address is appreciated far more than a disconnected, rambling and superficial talk, no matter how competent the speaker may be to talk upon the subject selected. Brevity—and conciseness consistent with lucidity—should be cultivated by all speakers, and no man is justified in accepting an invitation to appear before an audience unless he has made such preparation as will enable him to present his subject intelligently and concisely within the time allotted him. This means preparation in both the selection of material and the manner of presenting it. Any other course means an injustice to speaker and to audience.

“THOSE persons who are advocating the establishing of a federal department of public welfare are many of them no doubt well intentioned and sincere, yet it is a pity that efforts of this character cannot be directed toward the furtherance of plans more practicable and salutary. This country does not need a department of public welfare, such as is proposed, and its establishment would be bitterly resented as a bit of rank paternalism. This thing of attempting to direct American family life and to turn out citizens molded like ice cream flowers in the fashion designed by a lot of faddists does not fit in well with the popular conception of liberty and freedom of action. We have with us today far too many people who are endeavoring to shape the lives and govern the conduct of other people, and to establish a federal department which shall give these endeavors the sanction of the law and the power of authority is coming it entirely too strong to suit people who fled from the old world to escape just that sort of meddling interference, and those who having lived here all their lives have become imbued with the idea that those lives are theirs to live as they please so long as they please to live within the law. It is all very well to tell us that these benevolent friends who wish to mold us have “advanced ideas” and are loving benefactors, yet men, and women, too, for that matter, echo in their hearts the longing of the harassed and pestered British soldier who cried:

“Take me somewhere east of Suez
Where the best is like the worst,
Where there ain't no Ten Commandments,
And a man can get a thirst.”

“Not an ennobling or uplifting sentiment truly, but a very natural protest against the bullying regulations of those who spend their lives seeking to better others by submitting them to Procrustean standards of reform. The truth of the matter is that the American people have been regulated enough for a while and they want to be let alone.

“There is another objection to this proposal and that is the tremendous expense involved. It proposes a payroll as long as the moral law,

and would take care, at public expense, of all of the uplifters, reformers, freaks, and faddists in the whole country. This is no time to take on additional burdens in a financial way. Let us first see our way out of this dismal swamp of disastrous debt into which we were recently plunged by the forward looking gentlemen who thought so much of humanity that they forgot the people of the United States.”—*Fort Wayne Daily News and Sentinel*.

It is questionable if medical school inspection in some localities is not more harmful than beneficial. When the inspection is made by competent and well trained physicians it ought to accomplish great good. On the other hand, when it is carried out as it is in some localities in Indiana, by doctors having little medical education and training, by Red Cross or other nurses who profess to know more than they really do and often are guilty of over-officiousness in offering advice and suggestions that are irrational and not in keeping with established medical or hygienic rules, the medical inspection is very apt to lose most of its potent force for good. For the most part medical inspection in the cities is fairly good, though even there there is room for great improvement, because too much of the work is delegated to those not properly trained for the work, and we refer especially to the examinations that are entrusted to nurses and non-medical clerks or other employees connected with the Public Health Department. In the country districts medical inspection of schools is largely a farce, except in those rare instances when a real up-to-date and progressive physician is carrying on the work. In some of the counties of Indiana we know that the medical inspectors are more or less ignorant and poorly trained medical men who still believe that children in the public schools contract consumption when the school rooms are ventilated or when sleeping with the windows open, and still maintain the ignorant and untenable opinion that tonsil and adenoid tissue was put in the throats of children for a purpose, and that if there is any excess of it, it can be reduced by “absorption treatment”. In Indiana there are even some nurses, presumably trained in the up-to-date methods, who are equally as lame as the doctors in possessing modern medical knowledge, and whose suggestions and advice to the parents and children of some communities are positively pernicious. All of which reminds us that this railroading of people and especially school children into beliefs promulgated by a species of socialistic medicine, is but the beginning of ill effects which will result if the plan is carried still farther and the public is asked to go to the State for its medical advice and attention. We have no criticism to offer of the

general plan of having school children inspected upon entrance to our public schools, and in a measure under the control of medical inspection at all times, so far as it pertains to limiting transmissible diseases among school children, but we do object to the practice of making a farce of medical inspection by placing it in the hands of incompetents.

DEATHS

CLARENCE P. COLBURN, M.D., died at his home in Richmond, November 17, at the age of sixty-two years. Dr. Colburn graduated from the Miami Medical College at Cincinnati in 1883.

BENJAMIN H. COOK, formerly of Indiana, died at his home in Los Angeles at the age of sixty-three years. Dr. Cook graduated from the Medical College of Indiana at Indianapolis in 1885 and was a member of the Madison County Medical Society, the Indiana State Medical Association and the American Medical Association.

H. H. MILLER, M.D., of Galveston, was instantly killed, November 21, when the automobile which he was driving was struck by a Pennsylvania train. Dr. Miller was fifty years of age. He graduated from the Louisville Medical School in 1897 and was a member of the Cass County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. G. R. COFFIN, of Monticello, has been elected mayor of that city.

THE Jasper-Newton County Society held a meeting at Mt. Ayr on October 28.

ROOSEVELT Hospital celebrated the fiftieth anniversary of its founding November 2.

DR. M. V. B. NEWCOMER, of Tipton, celebrated his eighty-fifth birthday October 30.

DR. CLAUDE LOMAX has moved to Holland, Indiana, where he is practicing medicine.

CONTRACTS have been let for the erection of the Blackford County Hospital at Hartford City.

DR. RICHARD A. POOLE has been appointed superintendent of the City Hospital in Indianapolis.

DR. CLYDE C. BITLER underwent an operation for appendicitis at the Clinic, Newcastle, October 24.

DR. IRA COLE has removed from Williamsport to Linden, where he will take over the practice of the late Dr. Mitchell.

DR. CHARLES A. BARNHILL has moved his office from the Hume-Mansur Building to Suite 536-540 in the Bankers Trust Building.

PROFESSOR STANLEY COULTER, dean of Purdue University, will head the annual Christmas seal sale in Indiana this year.

DR. FREDERICK J. FRESHLEY, of Evansville, has been found guilty by the federal court of violating the Harrison narcotic law.

DR. CLEMENS VON PIRQUET, Vienna, has arrived in New York. He will deliver the Stillman course of lectures at Yale University this winter.

A VOCATIONAL training center is to be established at the Irene Byron Hospital at Fort Wayne. Dr. John H. Rhys will have charge of the work.

DURING the year 1920 in the birth registration area of the United States, 1,508,874 births were reported and in the same area 836,154 deaths were reported.

THE Randolph County Medical Society held its meeting in the new hospital at Winchester, November 15. A paper was presented by Dr. Milliken of Ridgeville.

DRS. S. L. MCKINNEY, H. K. STORK, of Huntingburg, and J. P. Salb of Jasper, have been appointed members of the staff at St. Mary's Hospital, Evansville.

THOMAS I. CARRITHERS has donated five thousand dollars to be used in the purchase of a home suitable for nurses of the Methodist Hospital at Princeton, Indiana.

THE Steuben County Medical Society held a meeting November 25. Dr. Eric Crull of the Irene Byron Hospital, Fort Wayne, presented a paper on the "Prevention of Disease".

THE Fourth District Indiana State Nurses' Association held a meeting November 9. Mrs. C. D. Fansler, of the Methodist Hospital, Indianapolis, was elected president.

DR. O. G. BRUBAKER, for seven years a medical missionary in China, has opened an office in North Manchester for the special practice of eye, ear, nose and throat diseases.

A NEW corporation by the name of "The Clinic" has been established at 501 Pine Street, Michigan City, for the purpose of establishing and maintaining a sanitarium and hospital.

THE Tenth District Medical Society held its meeting at Gary, November 10. Papers were presented by Drs. W. A. Shackelton, Charles A. Elliott and Louis J. Pollock, all of Chicago.

THE Wabash County Medical Society held its meeting at Wabash, November 17. Dr. LaSalle presented a paper on "Tonsillectomy" and Dr. More discussed "Incipient Tuberculosis".

THE state tuberculosis hospital at Rockville, Indiana, will be enlarged in order that ex-servicemen afflicted with tuberculosis may receive care without leaving their home state.

THE Huntington County Medical Society held its regular meeting at Huntington, November 1. Dr. Wallace Grayston read a paper on "Intussusception". Dr. Charles H. Good led the discussion.

THE Benton County Medical Society held its meeting at the home of Dr. W. H. Taylor, November 8, and elected the following officers for 1922: President, O. M. Flack, Boswell; Secretary, J. L. Morehouse, Fowler, Indiana.

DR. B. W. HARRIS, of Uniondale, has located in Gary, Indiana, where he will engage in the practice of medicine as a member of the firm of Craig, Proper & Harris. Dr. Harris will specialize in diseases of children.

THE Hamilton County Medical Society held a meeting at the Houston Hotel, Noblesville, November 8. The principal paper of the evening was presented by Dr. Lafayette Page, of Indianapolis, whose subject was the Riley Memorial.

DR. ANDREW T. CUSTER of Indianapolis announces to the medical profession the establishment of the Custer Rectal Clinic, with offices at 618 Hume-Mansur Building. The Clinic will

give medical and surgical treatment to diseases of the rectum, with special attention to the treatment of hemorrhoids and rectal cancer.

THE board of governors of the National Anesthesia Research Society will hold a world's convention of anesthetists in conjunction with their next annual meeting at Columbus, Ohio. Invitations will be sent to the leading anesthetists in London, Paris, Vienna, Buenos Aires, Sydney and other world centers of importance.

THE Ohio Valley Medical Association held its annual convention at Evansville, November 17, and the following officers were elected: President, Dr. L. W. Bremerman, Chicago; first vice-president, Dr. L. L. Solomon, Louisville; secretary-treasurer, Dr. Benjamin F. Floyd, Evansville. The next convention will be held in Evansville.

THE Third District Medical Society held its meeting October 12, at Salem. The following papers were presented: "Occipito Posterior Position in Obstetrics," by Dr. Wm. Green, of Pekin; "The Management of Chronic Valvular Diseases of the Heart," by Dr. Wm. Jenkins, of Louisville; and "The Management of Empyema," by Dr. H. B. Shacklett, of New Albany.

THE Department of Commerce announces that the Census Bureau's annual report on mortality statistics shows 1,142,578 deaths as having occurred in 1920 within the death registration area of continental United States, representing a death rate of 13.1 per 1,000 population as compared with 12.9 in 1919, which was the lowest rate recorded in any year since the registration area was established in 1900.

THE Indiana State Board of Health has instituted a new division of the Board known as the Housing Division. Tenement house surveys will be made in the large cities as rapidly as possible and the exact conditions reported. All plans and specifications made by architects for hotels, lodging houses and tenements must be submitted to the State Board of Health for approval.

DURING November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: G. W. Carnrick Co., Amylzyme Capsules. Merck & Co., Bromipin 10 percent, Iodipin 10 percent. Tablets. Powers-Weightman-Rosengarten Co., Theobromine-P. W. R. Schering & Glatz, Xeroform-S. and G. E. R. Squibb & Sons, Diphtheria Immunity Test (Schick Test)-Squibb, Diphtheria Toxin-Antitoxin Mixture-Squibb.

DR. DAVID I. MACHT, of Johns Hopkins University, has been awarded the third annual grant from the research fund of the American Pharmaceutical Association for his researches in connection with new antispasmodics. Dr. Macht has found that the benzyl derivatives have all of the sedative effects of the opiates without the objectionable influence of opiates and without an unfavorable reaction after their use. Dr. Macht will continue the investigations of other drugs having a sedative action.

THE mid-winter meeting of the Indiana Academy of Ophthalmology and Otolaryngology will be held at the Claypool Hotel, Indianapolis, all day Wednesday, January 18, 1922. The forenoon meeting will be called at nine o'clock in Parlor B, and the program consists of case reports, new instruments, etc. The afternoon program consists of papers, and the evening includes a banquet and an address. The complete program appears under Society Proceedings in this issue of THE JOURNAL.

THE St. Joseph County Medical Society held its thirty-sixth annual meeting in South Bend, November 16. The program included "Evolution of Symptoms in Diagnosis" by Albert E. Sterne, Indianapolis; "Reflex Abdominal Disorders" by Arthur E. Elliott, Chicago; "Operations on the Gasserian Ganglion with Report of Cases" by John F. Barnhill, Indianapolis; "Conservation of the Patient" by Frederick G. Dyes, Chicago; and in the evening Dean Stanley Coulter of Purdue University delivered an address on "The Physician and the Public".

THE following resolutions were unanimously adopted at the Mid-Western Association of Anesthetists' meeting held in Kansas City, Mo., October 25:

"WHEREAS, The middle western states are being circularized with false and misleading statements regarding the general practice of anesthesia and particularly the use of nitrous-oxid oxygen, and

"WHEREAS, The Mid-Western Association of Anesthetists is formed for the study and promotion of truth as it relates to the specialty of anesthesia in medicine, now therefore

"BE IT RESOLVED, That this society, in convention assembled, condemns the statements and the actions of Dr. J. F. Baldwin of Columbus, Ohio, in his utter disregard for truth and official records of recognized institutions as these relate to the practice of anesthesia and his efforts to discredit scientific advance by the unethical practice of disseminating false and misleading statements among medical, dental and hospital authorities throughout the United States."

INDIANA University is continuing this year the health education campaign undertaken last spring at the instance of the State Department of Public Instruction, with the primary purpose of interesting people of the state in the employment of public health nurses, and with the additional aim of reaching high school girls, women's organizations, and the general community in such a way as to encourage recognition of the importance of increasing the number of young women being trained for nursing service.

Miss Grace Pitt and Miss Mabel Loveless, registered graduate nurses from the Indiana University School for Nurses, are carrying on the field work, which will take them into practically every county in the state during the next seven months. Mrs. Ethel P. Clarke, director of the Indiana University School of Nursing, has outlined the work of the visiting nurses, while the arrangement of the itinerary is in the hands of the Indiana University Extension Division at Bloomington.

By means of conferences, demonstrations of nursing procedure, exhibits on the care of children, and moving pictures, the nurses strive to make their work of practical value to the communities visited. A program of three days is scheduled for each community, the first of which is devoted to setting up the exhibits and explaining them to individuals and groups. The morning of the second day is taken up with lectures, demonstrations and conferences with high school girls. The work of the public health nurse in the care of babies, in the examination of school children, and in nursing procedure which has special interest for the particular community visited is explained during the afternoon of the second day. The evening program consists of a lecture on community health problems. The third day is taken up with informal conferences by appointment or otherwise with girls as to the nursing profession, with mothers and teachers on the care of children, and with other persons who desire assistance. The visiting nurses carry with them four reels of motion pictures, one reel showing the instructional work given in training schools for nurses, one reel on the uses and methods of handling milk, and two reels entitled "An Equal Chance," which demonstrate the various ways in which children suffering with disease and injury may be brought to normal life.

Last spring the field nurses covered thirty-seven counties of the state, twenty-three of which had no public health nurse, and one of which had no registered graduate nurse in any branch of work. More than 8,500 high school girls attended talks on the preparation of foods and on nursing as a profession, while more than 1,700 mothers and teachers had personal interviews with the nurses on the care of children.

Among the interesting experiences which show the practical value of the health crusade was that of the nurses at Oakland City, where they found a ten-year-old daughter of foreign parents, almost blind. The child attended a lecture by the nurses and after hearing something of what could be done in cases of threatened loss of sight, ran home and brought her mother to the nurses. The interview with them developed the fact that the ignorant mother looked upon the case as entirely hopeless, but the nurses took up the matter with experts at the State School for the Blind, with good prospects for complete restoration of the child's sight.

Among the humorous incidents of their crusade last year, the nurses tell the story of a small boy at Anderson who, after hearing a health talk for children, called up Mrs. Ella Bagot Kehrler, prominent state charity worker, who was serving as chairman of the meetings, and asked her if his ears belonged to his face or to his neck. He explained that he hoped they belonged to his neck, for if they belonged to his face he would have to wash them three times a day instead of once a day if they belonged to his neck.

Last year the visiting nurses found twenty counties calling for public health nurses, without being able to obtain them, and in Ohio county, the smallest in the state, a fund of \$1,500 had been placed in the bank to be used for the services of a public health nurse as soon as one could be found.

The nurses carry with them literature on the proposed new Riley Memorial Hospital for Children at Indianapolis and are calling attention to the fact that the hospital, with its heavy staff of nurses, will materially increase the demand for nurses in this state. More than 10,000 children of Indiana are estimated to be in need of hospital attention and this fact is emphasized by the field workers in Indiana's newest health crusade.

CORRESPONDENCE

CONCERNING TARIFF ON CHEMICALS

Indianapolis, Indiana, Nov. 15, 1921.

EDITOR JOURNAL INDIANA STATE MEDICAL ASSOCIATION:

Dr. J. N. Hurty recently delivered an address on "The Organic Chemical Industry" at a meeting of about 100 persons in Indianapolis under the auspices of the Indianapolis Branch, American Pharmaceutical Association. Following this address and more than an hour's discussion, the meeting unanimously adopted a resolution asking Indiana's Congressmen and Senators to vote for a continuance of the present embargo on the importation of organic chemicals—medicinal, dye, photographic, etc.

A year or two ago the discussion about an embargo on organic chemicals centered around dyes. As this subject has received consideration it has been shown

to extend far beyond this one class of organic chemicals: medicinal chemicals are just as seriously concerned as are artificial dyestuffs.

For example, salicylic acid and its compounds and derivatives, such as acetylsalicylic acid, salol, sodium salicylate, etc., are the most largely used group of medicinal chemicals. So closely are these items allied with artificial dyestuffs that the primary market prices on salicylic acid are given under the classification "Dyestuffs, etc.," in trade reports such as are published weekly in the *Oil Paint and Drug Reporter*. Purified medicinal supplies are not primarily produced as articles of medicines but are drawn from acid produced primarily as an intermediate for artificial dyestuffs. The market price for medicinal supplies is very closely tied to the dyestuffs market.

In a practical way there has been an embargo due to the war for more than four years. In quantities of several hundred pounds on yearly contracts the primary market price on sodium salicylate has been approximately as follows:

1909, 36c	1914, 60c	1915, \$2.05	1916, \$2.30
1917, 87c	1918, 92c	1919, .50	1920, .60
1921, 28c			

Practically the embargo is still in operation and this reduction does not give any reason to the consumer to fear that a continuance of the embargo will create a monopoly that will overcharge for its products. This reduction during the past year has been passed along to the purchaser of medicinal preparations of salicylates.

Other medicinal substances closely bound to dyestuffs and like salicylic acid quoted in the dyestuff market report are phenol, cresol, resorcin, acetanilid, phenacetin, all the benzyl derivatives and a host of other important but less largely used articles.

Many chemicals produced originally only as dyes have become valuable as therapeutically active substances. Members of the fluorescein, rosaniline, eosine, and flavine groups have such dual importance. The stains used in bacteriology and in tissue work were first produced commercially as dyes.

Physicians have ample reason to concern themselves with the organic chemical industry and the support which we give it as a nation.

This support can with certainty take no other form than an embargo. Even the enemies of an American organic chemical industry are willing to concede that it should have whatever protection may come from a tariff. But a tariff however high is deceptive. Highly purified naphthalene under present custom regulations is covered by an almost prohibitive tariff, but naphthalene of a lower melting point and hence assumed to be less pure is almost free from tariff. Highly purified naphthalene sprayed with water (a small percentage only) takes on a lower melting point and hence evades the tariff. Such uncertainties as this destroy the usefulness of any protective tariff schedule.

Only an embargo for not less than five years to come will bring to America the certainty of an organic chemical industry suitable for her needs. Each member of the medical profession in Indiana may well declare himself on this subject to his Congressmen and Senators in Washington.

Yours truly,

A. D. THORBURN.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	13
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8
22.	Fulton	A. E. Stinson	15	17
23.	Jay	C. A. Paddock	18	20
24.	Lake	E. E. Evans	84	95
25.	Marshall	T. C. Eley	20	22
26.	Morgan	C. G. Bothwell	11	13
27.	Vanderburgh	Pierce McKenzie	72	82

INDIANA STATE MEDICAL ASSOCIATION
Membership List—1921

ADAMS COUNTY

683	Beavers, S. D.	Decatur
685	Boyers, J. S.	Decatur
2398	Costello, H. F., 215 N. Third St.	Decatur
686	Grandstaff, J. C.	Preble
678	Franz, E. E.	Berne
679	Hinchman, C. P.	Geneva
681	Miller, J. M.	Decatur
684	Parrish, M. F.	Monroe
675	Price, C. R.	Geneva
676	Rayl, C. C.	Decatur
677	Reusser, A.	Berne
680	Smith, W. E.	Decatur
682	Somers, L. E.	Monroe
2399	Vizard, J. W.	Pleasant Mills

ALLEN COUNTY

2004	Adams, J. R., 101 Brackenridge St.	Fort Wayne
2341	Beall, C. G., Lutheran Hospital.	Fort Wayne
2506	Berghoff, R. J., 315-17 Central Bldg.	Fort Wayne
2019	Barnett, C. E., 301 Med. Arts Bldg.	Fort Wayne
2003	Benninghoff, D. R., 1241 E. Lewis.	Fort Wayne
2587	Bickel, J. E., 506 E. DeWald.	Fort Wayne
2014	Blosser, H. V., 309 W. Main.	Fort Wayne
2023	Bolman, R. M., 1421 Wells St.	Fort Wayne
2015	Bowers, G. B. M., 328 E. Berry.	Fort Wayne
2512	Bowers, J. W., 421 Shoaff Bldg.	Fort Wayne
2005	Bruggeman, H. O., 1020 Harrison St.	Fort Wayne
2007	Buckner, D.	Fort Wayne
1958	Bulson, A. E., Jr., 406 W. Berry St.	Fort Wayne
2208	Bulson, E. L., 406 W. Berry St.	Fort Wayne
1997	Calvin, W. D., 312 W. Wayne St.	Fort Wayne
1990	Carey, W. W., Lutheran Hospital.	Fort Wayne
2017	Cartwright, E. L., General Elec. Co.	Fort Wayne
1972	Catlett, M. B., 404 Central Bldg.	Fort Wayne
2009	Crull, E. A., 406-8 Peoples Tr. Bldg.	Fort Wayne
2211	Culp, L. L., Indian Agency.	Washington, D. C.
1987	Dancer, C. R., 218 W. Washington.	Fort Wayne
1991	DeVaux, E. F., Wayne Trace.	Fort Wayne
1992	Dinnen, J. F., 227 W. Wayne St.	Fort Wayne
2206	Ditton, I. W., 216 Central Bldg.	Fort Wayne
1971	Drayer, L. P., Berry and Webster.	Fort Wayne
1966	Duemling, H. A., 301 W. Creighton.	Fort Wayne
1964	Dupre, B. G., 2927 Hoagland Ave.	Fort Wayne
1999	Eberly, Karl, 314 Med. Arts Bldg.	Fort Wayne
1981	Edlavitch, B. M., 1230 W. Wash.	Fort Wayne
1973	Enslin, Wm., 200-03 Med. Arts Bldg.	Fort Wayne
2519	English, C. H., 2509 Webster St.	Fort Wayne
2509	Gilpin, J. H., 234 Utility Bldg.	Fort Wayne
1960	Glock, Homer E., 404-5 Noll Bldg.	Fort Wayne
1962	Grandy, C. C., Lutheran Hospital.	Fort Wayne
1978	Grant, Margaret.	Fort Wayne
1989	Gross, Wm. O., 415 E. Washington.	Fort Wayne
2515	Hamilton, Allen, 337 W. Wayne St.	Fort Wayne
2513	Hanaway, N. J.	Fort Wayne
2511	Harshman, L. P.	Fort Wayne
1993	Havice, S. H., 130 W. Wayne St.	Fort Wayne
2517	Henderson, S. T., 224-6 Med. Arts.	Fort Wayne
2538	Hoffman, S. P., 418 Rose Lane.	Fort Wayne
2205	Hosford, J. H., 1302 Calhoun St.	Fort Wayne
2006	Huffines, T. R., Barr and Wash'ton.	Fort Wayne
2335	Johnston, T. L., 624 Calhoun St.	Fort Wayne

1979	Kaadt, C. F., 339 Brackenridge St.	Fort Wayne
2330	Kane, A. L. S., 235 W. Wayne St.	Fort Wayne
2001	*Kesler, A. J., 1901 Lafayette St.	Fort Wayne
2342	Kruse, E. H., 316-18 Central Bldg.	Fort Wayne
2334	Lill, J. C., 2102 Hanna St.	Fort Wayne
1994	Lohman, M. R., 336 W. Berry St.	Fort Wayne
2021	Macbeth, A. H., 415 E. Wayne St.	Fort Wayne
2018	Macbeth, B. G., 415 E. Wayne St.	Fort Wayne
2022	Macbeth, Harriet S., 329 E. Berry.	Fort Wayne
2510	McArdle, J. E., Webster and Berry.	Fort Wayne
1967	McBride, W. O., 328 Medical Arts.	Fort Wayne
2586	McCaskey, G. W., 409 W. Main St.	Fort Wayne
2333	McHugh, J. E., E. Creighton Ave.	Fort Wayne
2012	McKeehan, R. B., 2020 Broadway.	Fort Wayne
1998	Mendenhall, E. N., 231 Med. Arts.	Fort Wayne
2139	Mentzer, S. E.	Monroeville
1970	Metcalf, D. D., 1333 Calhoun St.	Fort Wayne
2016	Minnick, H. R.	Grabill
2539	Mikesell, A. L., 214 E. Washington.	Fort Wayne
1996	Morgan, E. E.	Fort Wayne
2011	Morgan, J. D.	Dixon, Ohio
2507	Morris, E. E.	New Haven
1968	Morris, I. E., 1941 Calhoun St.	Fort Wayne
2020	Moser, D. E.	Woodburn
1982	Neumeyer, Wm., 116 E. Sutfenfield.	Fort Wayne
2337	Nieschang, C. C. F., 1118 Calhoun.	Fort Wayne
2336	Phillips, A. F.	Fort Wayne
1974	Porter, M. F., Carroll Bldg.	Fort Wayne
1975	Porter, M. F., Jr., Carroll Bldg.	Fort Wayne
2514	Pulliam, J. M., 1822 E. Wayne St.	Fort Wayne
2518	Ranke, J. W. H., 217 W. Wash.	Fort Wayne
1965	Rawles, L. T., 210 Medical Arts.	Fort Wayne
1985	Ray, H. A., 310 Medical Arts Bldg.	Fort Wayne
2332	Rhamy, B. W., W. Berry St.	Fort Wayne
2505	Rice, W. B., 1101 E. Pontiac St.	Fort Wayne
1969	Rodriguez, J.	Fort Wayne
1995	Rosenthal, M. I., 336 W. Berry St.	Fort Wayne
2209	Rothschild, C. L., 338-43 Utility.	Fort Wayne
2508	Royer, Don J.	Fort Wayne
2008	Schick, M. F., 116 W. Berry St.	Fort Wayne
2516	Schlegel, E. H., 1129 Maumee Ave.	Fort Wayne
1977	Schneider, A. L., 702 E. Lewis St.	Fort Wayne
2000	Senseny, H. M., 319 Medical Arts.	Fort Wayne
2010	Singer, E. C., 1801 Lafayette St.	Fort Wayne
2203	Sledd, S. D., 213-14 Noll Bldg.	Fort Wayne
2204	Smith, E. D., 133 W. Columbia St.	Fort Wayne
2002	Squires, J. W., 302 Shoaff Bldg.	Fort Wayne
2210	Steinman, H. E.	Monroeville
1961	Swanson, John, 1941 Fairfield Ave.	Fort Wayne
2013	Stoler, Albert, 412-13 Noll Bldg.	Fort Wayne
1980	Titus, Philip, 311 Central Bldg.	Fort Wayne
1982	Truelove, A. O., 219 W. Wayne St.	Fort Wayne
2340	Underwood, E. H., 2901 Broadway.	Fort Wayne
1986	Van Buskirk, E. M., 11-12 Lau Bldg.	Fort Wayne
1988	Van Sweringen, Budd, 208 W. Wash.	Fort Wayne
1963	Van Sweringen, Garrette, 633 W. Wayne St.	Fort Wayne
1959	Wallace, J. C., 302-303 People's Tr.	Fort Wayne
1976	Weaver, B. P., Carroll Bldg.	Fort Wayne
1984	Wheelock, K. K., 1020 Harrison St.	Fort Wayne
2338	Whitten, K. M., 343 W. Wayne St.	Fort Wayne
2331	Willett, I. H., 22 White Apts.	Fort Wayne
2207	Zehr, Noah, 406-7 Noll Bldg.	Fort Wayne

BARTHOLOMEW COUNTY

592	Benham, J. W.	Columbus
590	Breitenbach, O. C.	Columbus
2412	Butler, Wm. H.	Columbus
596	Carmichael, W. T.	Columbus
601	Clouse, B. A.	Columbus
2137	Cosby, G. O.	Elizabethtown
2413	Dudding, Benj. F.	Hope
598	DeLong, O. A.	Azalia
2604	Jackson, C. M.	Elizabethtown
589	Kamman, H. H.	Columbus
600	Kirkpatrick, A. M.	Columbus
591	Marshall, D. J.	Columbus
588	McCoy, Geo. T.	Columbus
593	Norton, F. D.	Columbus
599	Norton, T. J.	Grammer
2135	Norton, William.	Hope
597	Overshiner, Lyman.	Columbus
2138	Reed, L. D.	Hope
2139	Reggenas, E. G.	Hope
602	Roope, Alfred F.	Columbus
595	Suwerkup, L. R. A.	Columbus
594	Tilton, R. M.	Columbus
595	Wood, E. U. C.	Columbus

BENTON COUNTY

727	Atkinson, C. W.	Boswell
230	Bloom, H. G.	Oxford
226	Bundy, C. T.	Earl Park
1535	Clayton, Geo. R., 610 Lafayette Bldg.	Lafayette
220	Flack, O. M.	Boswell
224	Hubbard, H. H.	Boswell
228	Lee, R. E.	Oxford
728	LeSage, Arthur.	Fowler
227	MacGillivray, D. D.	Pine Village
222	Mavity, D. E.	Fowler

1382	McCabe, J. E.	Otterbein
223	Moorhouse, J. L.	Fowler
225	Parker, E. E.	Oxford
229	Smith, Ward A.	Otterbein
221	Taylor, W. H.	Ambia

HOONE COUNTY

1906	Ball, James R.	Lebanon
2282	Bassett, Clancy	Thorntown
1909	Beck, H. A.	Lebanon
2550	Bennett, Edwin M.	Albuquerque, N. M.
1914	Black, James H.	Lebanon
1912	Filiatreau, Raymond N.	R. F. D., Lebanon
1908	Higgins, O. C.	Lebanon
1913	Little, P. B.	Whitestown
1905	Masters, Luella M.	Thorntown
1915	Pollom, M. R.	Thorntown
1916	Rainey, E. A.	Lebanon
2419	Schultz, Guy A., Nat'l Mil. Home.	Danville, Ill.
1907	Smith, DeLaskie	Lebanon
1911	VanNuys, Mary	Lebanon
2281	Williams, W. H.	Lebanon
1910	Williamson, A. A.	Lebanon

CARROLL COUNTY

1823	Brubaker, E. H.	Flora
1836	*Callane, Marshall D.	Flora
1825	Carney, C. E.	Delphi
1835	Carney, John R.	Delphi
1837	Carter, Emerson	Bringhurst
2323	Clauser, A. C.	Delphi
1831	Conway, P. W.	Delphi
1830	Cooper, T. L.	R. F. D., Camden
1824	Crampton, Chas. C.	Delphi
1819	Davis, H. G.	Burlington
1821	Kearns, Thomas A.	Flora
1827	Kennedy, Chas. M.	Camden
1828	Kennedy, Eva N.	Camden
1829	Miller, E. B.	R. F. D., Flora
1834	Mullin, H. Y.	Rockfield
1838	Peters, Edward L.	Flora
1839	Peters, Thomas D.	Flora
1832	Quick, Wm. R.	Delphi
1826	Robinson, F. H.	Delphi
1820	Schultz, Judson J.	Delphi
2526	Spears, A. H.	Yeoman
1840	Trobaugh, W. A.	Cutler
1822	Wagoner, E. D.	Burrows
1833	Wray, B. Frank	Camden

CASS COUNTY

663	Ballard, C. A.	Logansport
649	Barnfield, J. H.	Logansport
646	Bradfield, J. C.	Logansport
2414	Busjahn, F. A.	Logansport
652	Cady, N. W.	Logansport
638	Carpenter, C. D.	Walton
1359	Cornell, J. Frank	Galveston
1358	Davis, John C.	Logansport
657	Egan, B. W.	Logansport
2268	Flanagan, E. P.	Walton
667	Graves, A. E.	New Waverly
640	Gilbert, J. L.	Logansport
2066	Hatfield, James A.	Walton
644	Hermann, F. J.	Logansport
2063	Hickman, C. C.	Logansport
661	Holloway, W. A.	Logansport
639	Holmes, W. W.	Logansport
654	Ivey, D. R.	Royal Center
647	Johnson, H. C.	Logansport
645	Jones, S. E., 716 W. Wabash St.	Crawfordsville
655	Kistler, F. M.	Royal Center
2141	Leisher, Chas. A., 5113 Euclid, Cleveland, Ohio	Logansport
650	Little, J. A.	Logansport
1355	Lybrook, David E.	Young America
666	McCully, C. H.	Logansport
665	Miller, G. D.	Logansport
656	Miller, H. H.	Galveston
653	Miller, L. C.	Twelve Mile
2064	Nelson, James V.	Logansport
662	Palmer, A. L.	Logansport
660	Palmer, Cora B.	Logansport
659	Palmer, Earl	Logansport
643	Quick, L. L.	New Waverly
641	Reed, J. H.	Logansport
2487	Roberts, Wm. J.	Logansport
642	Rubsan, Joseph	Logansport
1356	Schultz, Harry M.	Logansport
2065	Spohn, E. A.	Walton
664	Stanton, J. J.	Logansport
618	Stewart, J. W.	Logansport
658	Terflinger, F. W.	Logansport
651	Thomas, C. L.	Logansport
1357	Troutman, R. E.	Logansport

CLARK COUNTY

2460	Buckley, E. P., Switow Bldg.	Jeffersonville
2464	Cohen, David, 218 Spring St.	Jeffersonville
2458	Courtner, S. G.	Otisco
2456	Elrod, S. B.	Henryville
2462	Feld, David L., 421 Spring St.	Jeffersonville
2466	Funk, Austin, 404 Spring St.	Jeffersonville

2555	Graham, Oliver P.	Jeffersonville
2453	Hancock, C. F. C.	Jeffersonville
2580	Hancock, James D.	Jeffersonville
2457	Hauss, Robert B.	Sellersburg
2463	Marshall, T. J.	Charleston
2459	Mead, Arthur R., 437 Spring St.	Jeffersonville
2455	Mowrer, G. E., Speith Bldg.	Jeffersonville
2396	Peyton, David C.	Jeffersonville
2461	Pinkerton, W. J., U. S. Veterans' Bur.	Valparaiso
2468	Reeder, H. H., 408 Spring St.	Jeffersonville
2465	Ruddell, I. N., 345 Spring St.	Jeffersonville
2454	Smith, T. M.	Marysville
2467	Varble, Marshall, Best Bldg.	Jeffersonville
2504	Wells, Francis M.	Jeffersonville

CLAY COUNTY

1764	Boyer, George C.	Brazil
1765	Brown, Archie S.	Clay City
1758	Dilley, Fred C.	Brazil
1756	Elliott, Harry	Brazil
1769	Finch, Gilbert R.	Center Point
1762	Finley, Geo. W.	Brazil
2486	Freed, Martin A.	Clay City
1761	Hirt, Luther S.	Brazil
1770	Lambert, J.	Brazil
1755	Muncie, Henry L.	R. R. 2, Brazil
1763	Nussell, Fredrick	Brazil
1760	Palm, William	Harmony
1767	Pell, Geo. M.	Carbon
1757	Pell, Harry M.	Brazil
2050	Rawley, Jas. A.	Brazil
2051	Rentschler, Lewis C.	Clay City
1768	Smith, Jacob E.	Brazil
1759	Sourwine, C. C.	Brazil
1766	Veach, P. H.	Staunton

CLINTON COUNTY

76	AuBuchon, F. P.	Michigantown
2086	Bergen, E. D.	Frankfort
82	Boulden, M. F.	Frankfort
2085	Bowers, Harvey C.	Akron
87	Chittick, A. G.	Frankfort
89	Chittick, Charles	Frankfort
88	Clark, N. W.	Rossville
251	Compton, C. B.	Michigantown
535	Cripe, D. E.	Hillisburg
77	Hadley, J. W.	Frankfort
1743	Hamilton, Alexander	Frankfort
83	Harding, L. L.	Frankfort
1443	Johnson, John M.	Frankfort
253	Kent, J. A.	Mulberry
252	McCarty, M. T.	Frankfort
80	Mount, W. C.	Kirklin
85	Oliphant, H. N.	Frankfort
2126	Parker, A. P.	Kirklin
1301	Price, J. D.	Rossville
78	Robison, C. A.	Frankfort
79	Robison, J. E.	R. R. 2, Frankfort
84	Royster, H. R.	Frankfort
86	Simms, S. B.	Frankfort
1302	Suhre, E. F.	Forest
1303	Thorpe, F. N.	Boyleston
81	Van Kirk, J. A.	Frankfort
254	White, B. O.	Sedalia
2225	Wisehart, W. H.	Colfax
1744	Zinn, Chas. A.	Frankfort

CRAWFORD COUNTY

2037	Myers, J.	Alton
2395	Wedding, M. F.	Leavenworth

DAVIES COUNTY

232	Anderson, J. W.	Oden
239	Boner, G. W.	Washington
238	Bowman, Ira E.	Oden
235	Burress, B. O.	Alfordsville
244	DeMotte, Jerome	Oden
236	*Donaldson, A. I.	Washington
2589	Hart, Douglas	Montgomery
247	Herr, H.	Washington
240	Hollingsworth, E.	Washington
234	Lett, O. E.	Montgomery
249	McPherson, S. L.	Washington
245	McKittrick, W. O.	Plainsville
241	Porter, M. G.	Elnora
248	Rang, Arthur A.	Washington
2033	Rankin, T. B.	Scotland
233	Scudder, C. P.	Washington
243	Smoot, D. B.	Washington
246	Spink, T. F.	Washington
242	Wadsworth, H. C.	Washington
250	Willeford, Geo. W., 454 W. 29th St.	Indianapolis
237	Yenne, C. H.	Washington

DEARBORN-OHIO COUNTIES

842	Batman, E. D.	Lawrenceburg
821	Bond, M. L.	Aurora
840	Cowen, L. C.	Rising Sun
822	Duncan, W. T.	Aurora
839	Dwyer, H. H.	Lawrenceburg
820	Elfers, John	Rising Sun
823	Elliott, J. C.	Guilford

843	Emmert, E. J.	Lawrenceburg	44	Gordon, Virgil	Blountsville
824	Fagaly, A. T.	Lawrenceburg	1	Green, E. S., 102 West. Res. Life Bldg.,	Muncie
845	Fletcher, C. F.	Sunman	1895	Harrold, John R.	Roll
825	Hansell, Geo. H.	Rising Sun	1891	Hill, Frank E.	Muncie
826	Holmes, E. S.	Aurora	2145	Hollis, Ella	Hartford City
841	Housmyer, C. C.	Dillsboro	40	Hollis, Wm. A.	Hartford City
831	Jackson, J. M.	Aurora	98	Jackson, Frank G., 216 E. Adams St.	Muncie
844	Johnston, D. E.	Moore's Hill	50	Jump, Chas. A.	Selma
827	Libbert, E. J.	Aurora	1892	Jump, S. G.	Muncie
828	Long, H. P.	Dillsboro	2149	Kemper, Arthur T.	Muncie
846	Marshall, C. C.	Aurora	1896	Kirklin, Byrl R.	Muncie
832	Mueller, F. M.	Lawrenceburg	561	Kirkpatrick, J. C.	Roll
838	Newforth, C.	Sunman	215	Kirshman, Chas. J.	Albany
837	Robinson, W.	Sunman	2150	Leatherman, Cameron A.	Muncie
829	Sale, F. H.	Dillsboro	30	Mann, Eli B., Wysor Block	Muncie
836	Smith, G. F.	Lawrenceburg	213	Mansfield, Thomas J.	Muncie
2479	Stevenson, Geo. A.	Rising Sun	2547	McMorries, John H.	Muncie
830	Stewart, O. H.	Aurora	29	Miller, Chas. E., 315 S. Jefferson St.	Muncie
833	Sutton, H. H.	Aurora	34	Mills, Cassius C., West. Res. Life Bldg.,	Muncie
834	Treon, J. F.	Aurora	97	Mix, C. Melvin, West. Res. Life Bldg.,	Muncie
835	Wallace, E. R.	Aurora	39	Molloy, Wm. J., Neely Block	Muncie
			36	Moore, W. C., West. Res. Life Bldg.	Muncie

DECATUR COUNTY

285	Bentle, P. C.	Greensburg	1897	Morrow, B. B.	Muncie
287	Bird, E. R.	Greensburg	563	Owens, Thomas R., 220 W. Jackson St.	Muncie
277	Clark, P. E.	Clarksburg	48	Payton, Lewis, 223 N. High St.	Muncie
282	Douglas, D. E.	Greensburg	2148	Poland, U. G.	Muncie
281	Evans, J. M.	Greensburg	35	Quick, James M.	Muncie
280	Glass, J. G.	Greensburg	1899	Quick, John C., 114 Howard St.	Muncie
292	Kercheval, C. F.	Greensburg	2549	Power, U. G.	Albany
289	McKee, H. S.	Newpoint	2	Rea, Clarence G., 6 Roberts Block	Muncie
286	Sanders, I. M.	Greensburg	1886	Sellers, Chas. A.	Hartford City
278	Thomas, W. E.	Greensburg	2588	Sexauer, Chas. F.	Newcastle
276	Tindall, P. R.	Shelbyville	2146	Shadday, Elmer D.	Montpelier
288	Tremain, M. A.	Adams	1898	Sperry, H. E., 401 Lewiston, Rochester, N. Y.	
291	Turner, W. R.	St. Paul	2382	Spickerman, Harry R.	Muncie
279	Weaver, D. W.	Greensburg	42	Spurgeon, Orville E., 215 E. Jackson St.	Muncie
290	Welch, J. A.	Letts	426	Spurgeon, Wm. A.	Muncie
283	Welch, O. F.	Westport	1887	Stephens, Walter C.	Muncie
275	White, B. S.	Greensburg	96	Taylor, James A.	Montpelier
284	Wood, Charles	Westport	214	Tindal, Edward F.	Muncie
			31	Trent, I. N., 108 E. Jackson St.	Muncie
			1903	Vanderburg, James M.	Albany
			47	Wadsworth, W. W.	Muncie
			43	Werry, Leslie E.	Hartford City
			2384	Williams, John H.	Cowan
			2385	Wright, C. H.	Yorktown

DEKALB COUNTY

2070	Baxter, J. C.	Auburn	2377	Bigham, O. A.	Batesville
689	Bevier, Frank	Waterloo	628	Bretz, W. D.	Huntingburg
2498	Brunson, V. C.	Butler	730	Eifert, E. E.	Hayesville
2441	Clarke, Charles R.	Auburn	729	Gugsell, A. F.	Ferdinand
186	Fanning, Frank D.	Butler	637	Johnson, L. B. W.	Ireland
187	Farnham, H. R., 513 E. Broadway, South Bend		636	Knapp, H. C.	Huntingburg
2469	Fretz, John C.	Waterloo	632	Lukemeyer, E. G.	Huntingburg
531	Geisinger, L. N.	Auburn	633	Lukemeyer, L. C.	Huntingburg
185	Harrison, Lynn H.	Butler	634	McKinney, S. L.	Huntingburg
193	Hines, A. V.	Auburn	1371	Rust, Wm. F.	Holland
194	Hines, D. M.	Auburn	630	Salb, J. P.	Jasper
192	Hines, F. M.	Auburn	631	Salb, Leo A.	Jasper
2372	Howard, C. E.	Garrett	627	Schwartz, C. W.	Huntingburg
2322	Ish, Ethan A.	Waterloo	635	Steinkamp, E. F.	Huntingburg
2371	King, Frank A.	Garrett	1523	Stork, Harvey K.	Huntingburg
191	Klingler, M. E.	Garrett	629	Sturm, E. A.	Huntingburg
2411	Nusbaum, Wm. H., 605 Occidental, Indianapolis				
2072	Reynolds, D. M.	Garrett			
2073	Sanders, J. A.	Garrett			
2374	Schurtz, Espy K., Nat'l San., Johnson City, Tenn.				
2071	Showalter, J. E.	Waterloo			
184	Shumaker, Wm. F.	Butler			
690	Souder, U. S.	Auburn			
190	Stewart, C. S.	Auburn			
189	Swarts, W. W.	Auburn			
2370	Syman, W. G.	Garrett			
188	Thomson, J. W.	Garrett			

DELAWARE-BLACKFORD COUNTIES

1894	Ames, Geo. F.	Eaton	1690	Amick, Chas. L.	Wakarusa
1889	Andrews, Geo. R.	Muncie	1663	Ash, Elmer E.	Goshen
2147	Atkinson, James M.	Eaton	1691	Barwick, Samuel O.	Elkhart
1900	Ball, Clay A.	Muncie	1664	Becknell, I. J.	Goshen
33	Ball, Lucius L., West. Res. Life Bldg.,	Muncie	1692	Benham, Frank A.	Elkhart
2151	Barnard, P. C.	Parker	1886	Brumbaugh, Melvin T.	Foraker
41	Beeson, Roscoe H., West. Res. Life Bldg.,	Muncie	1723	Carnally, J. H.	Elkhart
564	Bell, J. N.	R. R. 6, Muncie	1889	DeFrees, H. J.	Nappanee
2386	Berry, Noah D.	Muncie	1693	Dewey, Fred N.	Elkhart
1901	Bock, C. L.	Muncie	1665	Drees, C. L.	Goshen
2383	Boram, E. V.	Oakville	1670	Eby, Henry W.	Goshen
38	Bowles, Herman S., 310 E. Washington,	Muncie	1678	Eby, Ida L.	Goshen
1885	Brown, Karl T.	Muncie	1694	Eckleman, M. M.	Elkhart
2144	Buckles, H. L.	Hartford City	1685	Eicher, Floyd I.	Wakarusa
95	Bucklin, G. W., 525 E. Main St.	Muncie	1695	Elliott, L. A.	Elkhart
2557	Bunch, F. L.	Muncie	1680	Farver, M. A.	Middlebury
49	Cecil, A. A., 1022 Kirby Ave	Muncie	1697	Fleming, Claude F., 6148 Greenview, Chicago, Ill.	
46	Clauser, E. H.	Muncie	1696	Fleming, John C.	Elkhart
1893	Cole, Russell E.	Muncie	1666	Freeman, F. M.	Goshen
2548	Corey, C. W.	Hartford City	1698	Frink, Chas. W.	Elkhart
28	Cowing, Hugh A., 210 S. High St.	Muncie	1699	Grossnickle, Geo. W.	Elkhart
1890	Dando, Geo. H.	Montpelier	1681	Harper, W. Q.	Millersburg
45	DeWees, Roy E.	Hartford City	1700	Haywood, Chas. W.	Elkhart
32	Downing, J. Frank, 118 S. Franklin St.	Muncie	1704	Hoover, E. M.	Elkhart
1902	Dunn, F. Wm.	Muncie	1702	Hoppingarner, Geo. B.	Elkhart
1888	Esch, G. H.	Muncie	1701	Holdeman, E.	Elkhart
3	Fair, Herbert D., 103 West. Res. Life,	Muncie	1667	Hollingsworth, Allen S.	Goshen
562	Fisher, E. S.	Carter, Montana	2343	Inks, Chas. A.	Nappanee
37	Glascok, Fred L., 214 E. Adams St.,	Muncie	1682	Irwin, Albert J.	Goshen
			1703	Kistner, John W.	Elkhart
			1668	Kreider, M. K.	Goshen
			1669	Kreider, W. B.	Goshen
			1705	Kuhn, B. F.	Elkhart
			1672	Lemon, Herbert K.	Goshen

DUBOIS COUNTY**ELKHART COUNTY**

1706	Lockwood, Reuben L.	Elkhart
1708	Markel, Ivan J.	Elkhart
1709	Mast, Jacob C.	Elkhart
1707	McKee, Horace N.	Elkhart
1671	Miller, D. L.	Goshen
1710	Miller, S. T.	Elkhart
1711	Murphy, Robert M.	Elkhart
1712	Norris, Allen A.	Elkhart
1675	Page, Wm. B.	Goshen
1713	Porter, Jesse B.	Elkhart
1687	Price, Melvin D.	Nappanee
1688	Price, Willard A.	Nappanee
1714	Randolph, Frank	Elkhart
1679	Slabaugh, J. S.	Nappanee
1715	Short, I. W.	Elkhart
1674	Simmons, L. H.	Goshen
1673	Snapp, James A.	Goshen
1716	Spohn, Geo. W.	Elkhart
1717	Stauffer, Walter A.	Elkhart
1718	Staufft, H. O.	Elkhart
1683	Teters, B. F.	Middlebury
1684	Teters, Melvin	Middlebury
1719	Todd, David D.	Elkhart
1676	Vanderbogart, H. E.	Goshen
1721	Wagner, S. C.	Wakarusa
1720	Work, James A., Jr.	Elkhart
1677	Yoder, Albert C.	Goshen
1722	Zimmerman, E. R.	Elkhart

FAYETTE COUNTY

1946	Booher, I. E.	Connersville
582	Clark, J. H.	Connersville
1516	Dale, Omar E.	Everton
584	Elliott, R. H.	Connersville
585	Gordin, S. E.	Connersville
2534	Leffel, John S.	Connersville
1515	Metcalf, Henry C.	Connersville
1517	Morrow, Roy D.	Connersville
2358	Mountain, Jos. R.	Connersville
2142	Osborn, Harry S.	Connersville
586	Phillips, W. R.	R. R., Glenwood
2359	Sample, James M.	Connersville
587	Smelser, H. W.	Laurel
581	Smith, B. R.	Connersville
583	Spilman, F. J., Jr.	Connersville
2143	Walther, J. E.	Greenwood

FLOYD COUNTY

521	Ashahranner, J. H., 509 E. Spring	New Albany
514	Baxter, J. W., 1203 E. Spring St.	New Albany
515	Baxter, S. M., 1201 E. Spring St.	New Albany
516	Bird, J. E., 1308 E. Spring St.	New Albany
509	Cook, C. P., The Elsby	New Albany
522	Davis, C. P.	Galena
525	Day, Geo. H., Floyd Co. Bank	New Albany
523	Engleman, H. K.	Georgetown
507	Funk, C. C., 315 E. Spring St.	New Albany
511	Harris, R. W., 621 Vincennes St.	New Albany
1413	Hauss, A. P., Jr.	New Albany
508	Hazelwood, Felix W., The Elsby	New Albany
512	Hazelwood, J. H., 904 E. Main St.	New Albany
529	Leach, W. J., The Elsby	New Albany
517	McCullough, J. Y., 624 E. Spring	New Albany
524	McKamy, A. I., 1109 E. Spring St.	New Albany
513	Moore, William, The Elsby	New Albany
527	Rutherford, R. S.	New Albany
518	Schoen, P. H., 216 W. Market St.	New Albany
519	Schachlet, H. B., The Elsby	New Albany
1414	Sigmon, E. L.	R. R., Borden
520	Starr, W. L., E. 10th and Spring	New Albany
526	Tebault, Wm. P., 921 Vincennes St.	New Albany
510	Winstandley, W. C., 815 Vincennes	New Albany
530	Wolfe, H. S., 505 E. Spring St.	New Albany
528	Wray, John T., 421 N. 10th St.	Erie, Pa.

FOUNTAIN-WARREN COUNTIES

966	Beckett, C. G.	Attica
976	Bolling, L. A.	Attica
974	Bounell, E. G.	Hillsboro
977	Burlington, J. R.	Attica
978	Case, M. T.	Attica
1436	Claypool, R. W.	Melott
968	DeLancey, S. S.	Williamsport
1855	Dinsmore, W. H., 393 Ellicott Sq.	Buffalo, N. Y.
967	Holly, A. C.	Attica
1602	Johnson, E. E.	New Lebanon
973	Johnson, W. A.	Perrysville
965	Kerr, A. R.	Attica
1433	Kirk, E. W.	Veedersburg
969	Lambright, S.	Covington
964	McCord, C. B.	Veedersburg
1437	Porter, Geo. S.	Williamsport
1601	Ratcliff, A. L.	Kingman
979	Rowland, George	Covington
970	Spinning, A. L.	Covington
975	Stackhouse, Frank	Kingman
1434	Stephenson, Richard	West Lebanon
971	Sullivan, A. M.	Attica
972	Tilton, F. L.	Williamsport
1432	Wellenreiter, O. F.	Gessie
1435	Wert, Chas. C.	Covington

FRANKLIN COUNTY

1622	Allen, I. O.	R. R., Brookville
1621	Bighom, J. C.	Oldenburg
1624	Cupp, Millard F.	Metamora
1626	Garrigus, I. D.	Brookville
1623	Gifford, L. A.	Laurel
1618	Glaser, E. M.	Brookville
1620	Hutchins, J. L.	Cedar Grove
1619	Lucas, John W.	Brookville
1625	Remark, R. R.	R. R. 4, Brookville
1617	Seal, Frank E.	Brookville

FULTON COUNTY

1397	Brown, Archibald S.	Rochester
1396	Dielman, F. C.	Fulton
1394	Ferry, Perry L.	Akron
1407	Gilbert, Albert I.	Kewanna
1398	Gould, Chas. E.	Rochester
1403	Hosman, W. C.	Akron
1401	King, Milo O.	Rochester
1400	Loring, Chas. J.	Rochester
1402	Meek, L. C.	Tiosa
1399	Overmeyer, B. F.	Leiters Ford
1395	Shaffer, H. O.	Rochester
1406	Slonaker, Clement L.	Culver
1405	Stinson, Arthur E.	Athens
1393	Taylor, H. W.	Rochester
2556	Terry, S. P.	Rochester
2424	Wait, Earl	Macy
1404	Washburn, John M.	Kewanna

GIBSON COUNTY

710	Alexander, H. H.	Princeton
720	Arthur, H. M.	Hazelton
721	Arthur, M. L., 5007 Prospect Ave.	Cleveland, O.
717	Arthur, S. I.	Patoka
707	Beresford, G. B.	Owensville
706	Brazelton, O. T.	Princeton
2053	Brown, A. P.	Princeton
715	Burton, A. R.	Princeton
705	Critchfield, J. S.	Princeton
703	Cushman, R. A.	Princeton
2134	Diefendorf, Chas. F., Coroner's Off.	Evansville
718	Lindley, C. M.	Princeton
709	Lockhart, T. L.	Owensville
716	Marchand, V. H.	Haubstadt
2054	Mason, Geo. C.	Oakland City
1367	Mason, R. S.	Oakland City
708	Maxam, F. H.	Princeton
719	McGown, J. W.	Oakland City
713	Miller, Chas. A.	Princeton
704	Montgomery, J. R.	Owensville
1366	Morris, John L.	Princeton
711	Morris, W. F.	Ft. Branch
722	Null, Chas. L.	Princeton
714	Petitjean, J. W.	Haubstadt
712	Rhodes, A. H.	Princeton
1368	Smith, Wm. H.	Oakland City
2179	Strickland, K. S.	Owensville
702	Ziliak, A. L.	Princeton

GRANT COUNTY

2185	Aldrich, Harry	Fairmount
488	Baldwin, M. F., I. O. O. F. Bldg.	Marion
494	Braunlin, W. H., 718 Nat'l Bank Bldg.	Marion
502	Brown, C. R., 603 Nat'l Bank Bldg.	Marion
489	Cameron, V. V., 201 Marks Bldg.	Marion
484	Conley, L. H.	Gas City
486	Crumrine, I. S. J.	Sweetzer
491	Dale, B. C., 412 Glass Bldg.	Marion
496	Daniels, E. O., 710 Nat'l Bank Bldg.	Marion
2189	Daniels, George R.	Marion
492	Davis, A. T., 413 Nat'l Bank Bldg.	Marion
493	Davis, Merrill S., Davis Bldg.	Marion
498	Eckhart, G. G., 617 Nat'l Bank Bldg.	Marion
485	Eshelman, L. H., 2923 S. Washington St.	Marion
500	Fankboner, W. A., 611 Nat'l Bank Bldg.	Marion
2190	Forrest, John H.	Marion
504	Harold, E. O., 322 Nat'l Bank Bldg.	Marion
2188	Hawkins, Z. T.	Swayzee
2187	Henley, Glenn	Fairmount
2186	Holliday, L. D.	Fairmount
2195	Johnson, James E.	Marion
533	Knight, J. C.	Jonesboro
2194	Lewis, M. J.	Marion
497	Loomis, J. F., 708 Nat'l Bank Bldg.	Marion
2196	McKay, J. D.	Marion
490	McQuown, O. W., 201 Marks Bldg.	Marion
2289	Miller, Harry, Soldiers' Home	Danville, Ill.
501	Overman, Chas. J., 608 Nat'l Bank Bldg.	Marion
495	Powell, Nettle B., 720 Nat'l Bank Bldg.	Marion
532	Priest, F. A., 308 Glass Bldg.	Marion
487	Richardson, G. G.	Van Buren
503	Rogers, W. J., Nat'l Bank Bldg.	Marion
2192	Ross, J. C.	Marion
2128	Stout, O. L.	Upland
2191	Studley, J. W.	Marion
2193	Trook, E. M.	Marion
483	Vigus, Chas. B.	Swayzee
2129	Williams, D. A.	Marion
499	Williamson, Harry, 612 Nat'l Bank Bldg.	Marion
2410	Zimmer, E. G.	Upland

GREENE COUNTY

2132	Amerman, Charles	Linton
2102	Berns, P. C.	Linton
2182	Burkhart, Thomas A.	Jasonville
2110	Clifford, J. W.	Worthington
2101	Cook, Thomas R.	Bloomfield
2103	Craft, Wm. F.	Linton
2108	Cravens, W. R.	Bloomfield
2183	Davis, Wm. M.	Worthington
2133	Isaacs, H. H.	Owensburg
2353	Johnson, Raymond	Worthington
2106	Lukenbill, L. C.	Marco
2104	Mason, E. R.	Bloomfield
2349	Osborn, G. G.	Jasonville
2109	Porter, George	Linton
2131	Simons, J. S.	Lyons
2551	Thayer, Marion N.	Linton
2105	Thomas, Albert A.	Linton
2596	Tourner, H. P.	Owensburg
2107	Van Sandt, F. A.	Bloomfield

HAMILTON COUNTY

1630	Baker, W. F.	Carmel
1627	Baldwin, L. J.	Westfield
2181	Bills, Leroy F.	Atlanta
1753	Catterson, Wm. E.	Noblesville
1628	Cooper, Ross A.	Carmel
1639	Davenport, I. W.	Sheridan
1629	Elfers, Chas. R.	Jolietville
1633	Fodrea, Zeri H.	Westfield
1631	Hanna, J. E.	Noblesville
1635	Ilavens, Edward D.	Cicero
1754	Haworth, Milton C.	Noblesville
1818	Hicks, J. L.	Arcadia
1636	Hooke, S. W.	Noblesville
1638	Johnson, Paul S.	Sheridan
1751	Newby, A. C.	Sheridan
1752	Pettijohn, O. B.	Noblesville
2369	Ray, Chas. C.	Arcadia
1750	Rodenbeck, F.	Arcadia
1640	Sturdevant, J. D.	Noblesville
1632	*Thompson, H. H.	Noblesville
1749	Tomlinson, Carl H.	Cicero
1634	*Tucker, F. A.	Noblesville
1637	Young, Edward M.	Sheridan

HANCOCK COUNTY

2564	Allen, Joseph L.	Greenfield
1841	Bruner, Chas. Herbert	Greenfield
2418	Ellingwood, James B.	Fortville
1844	Ferrell, Jesse E.	Fortville
2173	Gemmill, H. C., 2662 Madison Rd.	Cincinnati, O.
1842	Gibbs, Earl R.	Wilkinson
1845	Gibbs, Chas. Milo.	Greenfield
2563	Hervey, S. W.	Fortville
1843	Johnston, Wm. R.	Charlottsville
2280	Kneer, Chas. J.	Oaklandon
2038	Mace, E. E.	New Palestine
2174	McCord, Charles E.	Fortville
2598	Sisson, Ernest R.	Greenfield
2562	Slocum, Stewart	Fortville
2319	Titus, Chas. R.	Wilkinson

HARRISON COUNTY

1935	Amy, Wm. E.	Corydon
1937	Bottorff, John C.	Corydon
1936	Daniels, William	Corydon
1938	Mathys, Alfred	Mauckport

HENDRICKS COUNTY

1579	Armstrong, Lewis W.	Danville
1581	Barker, Thomas R.	Danville
1574	Carter, Amos	Rockville
1572	Cooper, Ernest	Plainfield
1575	Grimes, Jay H.	Danville
1570	Hendricks, John D.	Lizton
7	Jones, Rilus E.	Clayton
1578	Kinnaman, H. A.	Danville
1573	Lawson, Wilson T.	Danville
1580	O'Brien, T. J.	Clayton
1571	Ragan, John S.	Plainfield
1514	Royer, Elmo Ray, Chief Surgeon S.A.D. Co., P. O. Box 655, Guayaquil, Ecuador, S. America	
9	Scamahorn, O. T.	Pittsboro
8	Smith, Thomas G.	Brownburg
10	Stafford, J. C.	Plainfield
1577	Terrell, Wm. H.	Pittsboro
1571	Thomas, C. B.	Plainfield
1576	*White, Chas. A.	Danville
11	White, William H.	Amo

HENRY COUNTY

2545	Arford, R. D.	Middletown
2413	Beckett, Geo. T.	Lewisville
1349	Bitler, C. C.	Newcastle
2544	Call, Earl B.	Knightstown
2202	Canaday, C. F.	Newcastle
2201	Davis, Elmer J.	Mooreland
1344	Hardesty, J. C.	Newcastle
2444	Heilman, Wm. C.	Newcastle
1348	Hess, Frank C.	Cadiz
1350	Hiatt, Julius E.	Newcastle
2445	Kennedy, W. U.	Newcastle

*Deceased.

1351	Kirk, Elmer E.	Spiceland
2036	Koons, H. H.	Newcastle
2542	Lee, Roscoe L.	Newcastle
1340	MacDonald, H. W.	Newcastle
1354	Marsh, Chester A.	Newcastle
1339	Marshall, L. C.	Mt. Summit
1347	Paul, Jos. O.	Newcastle
2543	Rees, Omar H.	Knightstown
2035	Smith, G. H.	Newcastle
1342	Sterman, Geo. E.	Newcastle
1341	Stoute, Wm. M.	Newcastle
1346	Thompson, John F.	Newcastle
1352	Tully, J. A.	Newcastle
2200	Van Nuys, W. C.	Newcastle
1345	Waters, S. C.	Middletown
2446	Westhafer, E. K.	Newcastle
1353	Wiggins, D. S.	Newcastle
1343	Wright, Walter W.	Newcastle

HOWARD COUNTY

331	Adams, C. J.	Kokomo
813	Bannon, F. R.	Kokomo
338	Bennett, E. N.	Kokomo
330	Cochran, T. C.	Kokomo
818	Cuthbert, F. S.	Kokomo
2438	*DeWees, Leander	Hemlock
325	Gipe, W. W.	Greentown
2368	Grable, H. G.	Kokomo
329	Hamilton, N. C.	Kokomo
812	Harrison, William	Kokomo
339	Hatfield, S. D.	Kokomo
2366	Haworth, George D.	Kokomo
333	Hutto, O. D.	Kokomo
809	Knepple, L. M.	Kokomo
816	Lung, B. D.	Kokomo
337	Marshall, Geo. C.	Kokomo
1463	Martin, Will J.	Kokomo
810	McClurg, W. H.	Kokomo
1462	McIndoo, R. E.	Kokomo
808	Miller, A. H.	Russiaville
334	Miller, H. C.	Greentown
819	Morrison, W. R.	Kokomo
817	Murray, F. N.	West Middletown
2084	Newlin, Wm. H.	New London
1460	Powell, Elmer U.	Greentown
807	Puckett, J. L.	Kokomo
814	Ramey, J. W.	Kokomo
332	Ryan, Chas. D.	Kokomo
336	Schuler, R. P.	Kokomo
2367	Scott, R. F.	Kokomo
328	Scott, W. I.	Kokomo
1461	Shenk, Earl M.	Kokomo
811	Shoaf, F. A.	Kokomo
815	Wright, J. W.	Kokomo

HUNTINGTON COUNTY

481	Beck, Wm. R.	Huntington
455	Black, C. S.	Warren
465	Bonifield, Wm. D.	Warren
456	Chenoweth, A. C.	Bluffton
466	Clokey, M. C.	Huntington
457	Dippell, E. T.	Huntington
476	Edington, B. F.	Warren
471	Erehart, M. G.	Huntington
458	Frost, R. F.	Huntington
459	Fry, C. W.	Huntington
460	Frybarger, S. S.	Andrews
461	Galbreath, R. S.	Huntington
467	Good, C. H.	Huntington
462	Grayston, B. H. B.	Huntington
463	Grayston, F. W.	Huntington
464	Grayston, W. S.	Huntington
468	Hicks, J. M.	Huntington
474	Hoover, R. A.	Bippus
469	Johnston, R. G.	Huntington
470	Krebs, M. H.	Huntington
475	Laymon, H. E.	Warren
472	Morgan, F. B.	Huntington
473	Northrop, A. H.	Markle
482	O'Leary, G. M.	Huntington
478	Smith, L. W.	Warren
477	Smith, W. F.	Huntington
479	Wimmer, G. G.	Mt. Etna
480	*Wright, Chas. L.	Huntington

JACKSON COUNTY

1512	Abel, Virgil	Vallonia
1498	Adair, Wm. K.	Crothersville
2357	Chenoweth, E. B.	Seymour
1505	Cummings, David Jos.	Brownstown
1501	Gillespie, Chas. E.	Seymour
1496	Graessle, Geo. G.	Seymour
1494	Graessle, H. P.	Seymour
1506	Harrod, N. G.	Tampico
1491	Hill, L. B.	Seymour
1500	Hunter, Chas. A.	Seymour
1508	Jenkins, James M.	Cortland
1497	Kamman, G. H.	Seymour
1502	Kendall, A. P.	Crothersville
1507	May, Albert	Crothersville
1509	Matlock, Neal	Medora

1511	McKain, M. C.	Brownstown
1495	Niles, John H.	Seymour
1492	Osterman, A. G.	Seymour
1493	Perrin, D. L.	Seymour
1499	Richards, Polk	Brownstown
1510	Ritter, James K.	Seymour
1504	Sheilds, J. M.	Seymour
1503	Wright, Elmer D.	Seymour

JASPER-NEWTON COUNTIES

612	Bassett, C. C.	Goodland
617	Besser, E. E.	Remington
2447	Bucher, J. C.	Wheatfield
605	Collier, T. E.	Brook
621	Downes, A. W. K.	Newland
607	Edminsten, L. L.	Morocco
615	English, E. C.	Rensselaer
622	Glick, O. E.	Kentland
603	Gwin, M. D.	Rensselaer
620	Hemphill, F. H.	Rensselaer
626	Hewitt, H. S.	DeMotte
618	Johnson, C. E.	Rensselaer
610	Kennedy, Frank	Goodland
609	Kinneman, J. G.	Goodland
614	Kresler, A. R.	Rensselaer
604	Larrison, G. D.	Brook
2345	Leedom, Henry F.	Lynn
613	Leighly, P. T.	Lake Village
611	Loy, E. N.	Rensselaer
624	Martin, J. T.	Mt. Ayr
623	Mathews, W. C.	Kentland
1745	Morehouse, F. L.	Morocco
616	Rainier, Alfred	Remington
608	Recher, I. H.	Morocco
606	Triplett, C. E.	Morocco
625	Van Kirk, G. W.	Kentland
619	Washburn, I. M.	Rensselaer

JAY COUNTY

1871	Badders, A. C.	Portland
1865	Chaney, Grant	Portland
1857	Cring, Geo. V.	Portland
1957	Garber, E. C.	Dunkirk
2570	Hiatt, Edgar R.	Pennville
1861	Hiestand, Harley J.	Pennville
1870	Jay, Milton T.	Portland
1859	Jones, Howard H.	Salamonia
1858	Kidder, John J.	Salamonia
1862	Mackey, Chas. H.	Portland
1860	Markley, Henry W.	Redkey
2569	Moran, Mark M.	Portland
2267	Murray, D. P.	Dunkirk
1869	Nixon, Jesse E.	Portland
1867	Paddock, Chas. A.	Portland
1864	Perry, Geo. L.	Portland
1863	Schwartz, Wm. D.	Portland
1856	Smith, Grover A.	Bryant
1866	Walker, Wm. H.	Portland
1868	Wiley, Harriett.	Portland

JEFFERSON COUNTY

374	Childs, A. G. W.	Madison
371	Cochran, R. W.	Madison
378	Cook, E. C.	Madison
376	Copeland, C. C.	North Madison
534	Denny, C. W.	Madison
377	Denny, F. C.	Madison
372	Denny, G. E.	Madison
453	Hankins, F. C.	Madison
379	Hatch, H. S.	Madison
369	Henning, Carl	Hanover
1597	Mathews, Wm. R.	R. R. 2, Madison
373	Shepherd, Vincent	Dupont
375	Totten, E. C.	Madison
380	Turner, O. A.	Madison
370	Whitsitt, S. A.	Kent

JENNINGS COUNTY

875	Benson, N. J.	Vernon
877	Case, W. W.	Nebraska
1872	Daubenheyer, M. F.	Butler
25	Green, John H.	North Vernon
26	Grossman, W. L.	North Vernon
2558	Hayden, David N.	Monta Dora, N. M.
876	Mathews, D. W.	Commiskey
24	McAuliffe, D. L.	North Vernon
1038	Robertson, D. W.	Deputy
27	Stemm, W. H.	North Vernon
2273	Wildman, Wm. A.	R. R. 1, Butler
2078	Wilson, W. L.	Scipio

JOHNSON COUNTY

99	Baker, J. V.	Edinburg
2452	Craig, James A.	Greenwood
2425	Dobyns, P. K.	Hasting, Okla.
1746	Lind, Henry Grant	Ninevah
100	Mathews, Accie E.	Franklin
1337	Murphy, O. C.	Franklin
2115	Phipps, Lelenad K.	Franklin
1338	Phipps, David L.	Whiteland
1747	Province, O. A.	Franklin

2451	Records, John N.	Franklin
2114	Saunders, D. R.	Franklin
1945	Terhune, Rufus W.	Martinsville
2308	White, Wm. H.	Edinburg
1336	Willan, Carl E.	Trafalgar
1048	Williams, L. P. V.	Whiteland
1047	Woodcock, Chas. E.	Greenwood

KNOX COUNTY

399	Beard, S. C., 10 S. Third St.	Vincennes
400	Beckes, N. E., 414 Broadway	Vincennes
401	Boyd, C. L., 114 N. Fourth St.	Vincennes
402	Bryan, C. S., Amer. Nat'l Bank Bldg.	Vincennes
2067	Carson, S. L.	Vincennes
415	Curtner, M. L., 8th and Main Sts.	Vincennes
413	Deese, H. E.	Bicknell
1039	Downey, L. J., 504 Hart St.	Vincennes
403	Edwards, E. T., LaPlante Bldg.	Vincennes
404	Frigge, E. H., Amer. Nat'l Bank Bldg.	Vincennes
723	Funk, V. A., LaPlante Bldg.	Vincennes
418	Gilmore, L. L.	Monroe City
405	Griffith, B. B., LaPlante Bldg.	Vincennes
406	Held, H. W., 615 Busseron St.	Vincennes
2068	Hodge, W. A.	Emison
577	Hoover, Loren	Decker
2417	Johnson, Ernest N.	Sanborn
416	Johnson, Morris, 2nd and Main Sts.	Vincennes
574	Jones, J. G., 413 Broadway	Vincennes
407	Knapp, A. B., LaPlante Bldg.	Vincennes
408	McCormick, H. D., LaPlante Bldg.	Vincennes
579	McCoy, J. N., State Bank Bldg.	Vincennes
575	McDowell, J. D., Mayor's Office	Vincennes
724	Myers, A. W.	Monroe City
878	Pea, E. H., 112 N. 2nd St.	Vincennes
576	Prather, S. A., 1524 N. 2nd St.	Vincennes
409	Ramsey, J. P., 606 Main St.	Vincennes
2250	Reeve, Joseph L.	Edwardsport
410	Richards, D. H., Am. Nat'l Bk. Bldg.	Vincennes
414	Scudder, J. A.	Edwardsport
411	Smadel, J. W., 8th and Main Sts.	Vincennes
417	Small, E. F.	Decker
578	Staley, T. M.	Bicknell
412	Stewart, C. E., 7th and Buntin Sts.	Vincennes
580	Stone, Chas. E., State Bank Bldg.	Vincennes
419	Swartzel, J. A., E. 22nd St.	Indianapolis
2184	Tade, Ellis H.	Bicknell
2552	Trueblood, J. W.	Monroe City
725	Wilson, G. H.	Bicknell
726	Wood, R. S.	Wheatland

KOSCIUSKO COUNTY

506	Adair, Noah	Etna Green
12	Anglin, G. W.	Warsaw
732	Clutter, T. J.	Mentone
981	Druley, G. N.	North Webster
573	DuBois, Chas. C.	Warsaw
560	Fernier, P. J.	Leesburg
668	Ford, L. W.	Syracuse
801	Garber, Paul A.	Sidney
13	Howard, C. Norman	Warsaw
51	Hoy, B. F.	Syracuse
800	Hoy, C. R.	Syracuse
1734	Karasek, Mathews	Warsaw
421	Landis, W. C.	Claypool
1950	Leckrone, Ira	Silver Lake
14	Leedy, C. E.	Pierceton
536	Long, Chas. R.	Pierceton
687	Lyons, J. H.	North Webster
1593	Maxwell, J. B.	Atwood
446	McDonald, A. C.	Warsaw
879	Murphy, S. C.	Warsaw
731	Potter, John E.	Milford
443	Richer, O. H.	Warsaw
1591	Saunders, J. E.	Burket
15	Siders, W. Bert	Warsaw
1592	Steele, H. F.	Claypool
1594	Stockberger, E. M.	Milford
799	Taylor, G. C., 607 Hopper Bldg., Des Moines, Ia.	
93	Thomas, Chas. E.	Leesburg
447	Van Dyke, D. G. H.	Winona Lake
1049	White, Sidney G.	Warsaw
445	Yocum, M. G.	Mentone
444	Young, F. J.	Milford

LAGRANGE COUNTY

2172	Broughton, W. H.	Wolcottville
2428	Dryer, Chas. S.	Cincinnati, Ohio
2164	Eash, S. M.	Shipshewana
2167	Grubb, Albert G.	LaGrange
2165	Hildebrandt, W. O.	Topeka
2166	Hostetler, A. J.	LaGrange
2163	Hunn, M. Fred	Shipshewana
2423	Jones, Archie	LaGrange
2171	Rarick, J. E.	Wolcottville
2161	Rozelle, C. C.	LaGrange
2170	Vaughn, Iris J.	Topeka
2168	Wade, Alfred A.	Howe
2169	Wade, Frank C.	Howe
2162	Weir, Dale C.	Mongo
2160	Wyatt, A. R.	Fort Wayne

LAKE COUNTY

2402	Alexander, W. P., 690 Broadway.....	Gary
1562	Bauchbaum, M., 1082 Broadway.....	Gary
2481	Bicknell, Geo. F., E. Chi. Bk. Bldg., East Chicago	
2405	Bigger, W. M., 569 Hohman St.....	Hammond
366	Bills, Robert N., 548 Broadway.....	Gary
2247	Bolin, John T., 6365 Hohman St.....	Hammond
2235	Boardman, Carl, 522 Broadway.....	Gary
2242	Brink, C. C., 567 Broadway.....	Gary
358	Buchanan, W. A., 590 Hohman St.....	Hammond
347	Campbell, C. W., 575 Hohman St.....	Hammond
341	Chevigny, J. A., 635 Hohman St.....	Hammond
2567	Chidlaw, Citizens Nat'l Bank Bldg.,	Hammond
352	Cook, G. M., 636 Hohman St.....	Hammond
1565	Craig, John A., 738 Broadway.....	Hammond
2228	DeLong, Chas. A., 583 Broadway.....	Hammond
364	Derian, M. H., 752 Broadway.....	Gary
2230	Dewey, E. L.....	Whiting
362	Doll, F. R., 1st Nat'l Bank Bldg.....	Whiting
2566	Doty, Flavia M., 569 Broadway.....	Gary
345	Eggers, E. L., 636 Hohman St.....	Hammond
368	Evans, E. E., 515 Broadway.....	Gary
1569	Faulkner, Clara.....	Hobart
346	Fox, F. H., 575 Hohman St.....	Hammond
2229	Friedrich, Louis M.....	Hobart
1553	Giorgi, Antonio, 1651 Broadway.....	Gary
365	Goad, J. H., 1111 Roosevelt St.....	Gary
2234	Greene, G. S., 583 Broadway.....	Gary
2523	Griffiths, David E., 816 Buchanan St.....	Gary
361	Groman, H. C., 61 Rimback St.....	Hammond
2401	Hale, Raleigh P., 721 Chicago Ave., East Chicago	
1556	Hamilton, Robert C., Inland Steel Co.,	
	Indiana Harbor	
2408	Hedrick, R. M., 1715 Broadway.....	Gary
2522	Hofmann, Andrew, 114 Fayette St.....	Hammond
1563	Hopper, Milton S., 469 Broadway.....	Gary
2232	Hosmer, H. M., 555 Broadway.....	Gary
1554	Howatt, Wm. F., 832 Hohman St.....	Hammond
2227	Hughes, Wm. L., 3616 Cedar St., Indiana Harbor	
2226	Iddings, H. L.....	Merrillville
356	Iddings, J. W.....	Lowell
1566	Jones, E. S., Ruff Bldg.....	Hammond
2244	*Julien, Wm. F., 673 Broadway.....	Gary
2237	Kahan, Harry L., 555 Broadway.....	Gary
2249	Kan, A. M., 1700 Broadway.....	Gary
2582	Keeler, K. B., 500 119th St.....	Whiting
1560	Laue, W. P., 688 Broadway.....	Gary
2238	Lauer, A. J.....	Whiting
2525	Lawrence, Caroline C., P. O. Box 1028.....	Gary
2407	Lloyd, A. W., 504 Hammond Bldg.....	Hammond
1558	Loar, L. T., 1134 Broadway.....	Gary
1568	Long, H. W., 583 Broadway.....	Gary
2231	Mackey, Dwight.....	Hobart
1557	Malmstone, F. A.....	Griffith
354	McGuire, D. F., 3429 Michigan Ave., Ind. Harbor	
344	McMichael, F. J., 607 Broadway.....	Gary
360	Melton, O. O., 627 Hohman St.....	Hammond
2483	Merritt, Frank W., Gary Hospital.....	Gary
2246	Mervis, F. H., 3420 Michigan Ave., Ind. Harbor	
2248	*Miller, Geo. W., 720 Chicago Ave., East Chicago	
349	Miltimore, Ira, 548 Broadway.....	Gary
343	Nesbit, O. B., 444 Jackson St.....	Gary
340	Nichols, W. E., 1st Nat'l Bank Bldg., Hammond	
2584	Newton, Edw. K., 1st Nat'l Bank Bldg., Whiting	
348	Oberlin, T. W., 575 Hohman St.....	Hammond
350	Ostrowski, L. J., 3802 Cedar St., Ind. Harbor	
351	Ostrowski, R. O., 716 Hohman St.....	Hammond
2591	Pettibone, C. R.....	Crown Point
2568	Potts, Wm. A.....	Lansing, Ill.
1559	Propper, I. J., 738 Broadway.....	Gary
2583	Pugh, Jos. R., 61 Rimback Ave.....	Hammond
2403	Putnam, W. E., 119th and Chicago Ave., Whiting	
353	Rafacz, Michael, 502 119th St.....	Whiting
367	Reeve, Roscoe H., Standard Oil Hosp., Whiting	
2240	Reyher, C. M., 673 Broadway.....	Gary
2485	Robinson, C. C., 3410 Michigan Ave., Ind. Harbor	
2524	Ryan, Leo K., 625 Broadway.....	Gary
1564	Schaible, E. L., 583 Broadway.....	Gary
359	Schlesinger, J., 1025 Columbia Ave.....	Hammond
2482	Schlieker, A. G., E. Chicago Bk. Bldg., E. Chicago	
342	Shanklin, E. M., 575 Hohman St.....	Hammond
1555	Skeen, E. D., 555 Broadway.....	Gary
2243	Stephenson, L. E., Gary Hospital.....	Gary
2245	Stone, L. L., 2162 W. 11th St.....	Gary
1567	Tananewicz, A. J., 3815 Deodar St., Ind. Harbor	
2239	Teegarden, J. A., 3336 Mich. Ave., Ind. Harbor	
2233	Templin, Theo. B., 583 Broadway.....	Gary
2404	Turbow, B. M., 2201 137th St., Indiana Harbor	
2480	Verplank, Grover L., 527 Broadway.....	Gary
357	Weis, W. D., Citizens Bank Bldg.....	Hammond
2241	Wharton, R. O., 673 Broadway.....	Gary
363	White, H. J., 561 Hohman St.....	Hammond
2236	White, W. J., 790 Broadway.....	Gary
2484	Wicks, Orlando C., 607 Broadway.....	Gary
2406	Yarrington, C. W., 607 Broadway.....	Gary
355	Young, A. A., 1825 State St.....	Hammond
1561	Young, S. J., 522 Broadway.....	Gary

LAPORTE COUNTY

323	Annis, E. L.....	LaPorte
552	Blinks, E. G.....	Michigan City
204	Bowell, B. Carr.....	LaPorte
199	Bowers, Whitefield.....	Michigan City
209	Buck, D. A.....	LaPorte
207	Burleson, C. E.....	LaPorte
319	Crawford, E. F. W.....	Hanna
2212	Danruthers, Chas. B.....	LaPorte
318	Drescher, M. L.....	Michigan City
210	Fargher, J. H.....	LaPorte
555	Foster, J. H.....	Michigan City
326	Funk, Neil E.....	LaPorte
870	Gilmore, Russell A.....	Michigan City
212	Homman, Grace Line.....	LaPorte
200	Jones, R. B.....	LaPorte
201	Kelly, J. N.....	Westville
547	Kerrigan, J. J.....	Michigan City
549	Kerrigan, J. V.....	Michigan City
548	Kerrigan, R. L.....	Michigan City
203	Killough, A.....	Michigan City
198	Kimball, G. W.....	LaPorte
325	Krieger, Geo. M.....	Michigan City
322	Krueger, E. O.....	Michigan City
551	Leeds, Frank R.....	Michigan City
324	Martin, F. V.....	Michigan City
195	Martin, H. H.....	LaPorte
550	Mayfield, Chas. E.....	Wanatah
208	Meyer, J. H. Wm.....	LaPorte
872	Milligan, James W.....	North Madison
321	Oak, D. D.....	LaCrosse
1530	Pinkerton, Forest J., Alexander Young Bldg.	
	Honolulu, Hawaii	
320	Reed, Nelle C.....	Michigan City
196	Rogers, J. B.....	Michigan City
554	Ross, W. W.....	LaPorte
202	Short, R. B.....	Union Mills
205	Simon, A. R.....	LaPorte
206	Smith, Milton S.....	LaPorte
211	Sutherland, O. L.....	LaPorte
553	Tillotson, A. G.....	Michigan City
871	Walkinshaw, William.....	Stillwell
874	Warren, F. R.....	Michigan City
873	Weeks, P. H.....	Michigan City
197	Wilcox, F. T.....	LaPorte
327	Wilson, LeRoy A.....	Michigan City

LAWRENCE COUNTY

2048	Byers, Norman B.....	Bedford
1329	Byrns, James D.....	Mitchell
1334	Cain, Jasper.....	Heltonville
1319	Dollens, Claude.....	Oolitic
1328	Emery, Chas. H.....	Bedford
1332	Freeland, John T.....	Bedford
2062	Gibbons, Geo. Lee.....	Mitchell
1317	Gibson, John A.....	Mitchell
1313	Holland, D. J.....	Bedford
1326	Hunter, F. S.....	Bedford
1322	Kelley, John C.....	Mitchell
1321	Martin, Frank D.....	Bedford
1330	Matlock, H. J.....	Campbellsburg
1327	McDonald, A. J.....	Bedford
1311	McFarlin, John T.....	Williams
1314	Mitchell, E. E.....	Bedford
1315	Pearson, John.....	Bedford
1316	Perkins, E. L.....	Bedford
1324	Rariden, Chas. E.....	Bedford
1312	Sherwood, Walter C.....	Mitchell
1331	Short, R. B.....	Bedford
1333	Simpson, Morrell E.....	Bedford
1323	Smith, S. W.....	Leesville
1318	Voyles, Harvey.....	Bedford
1320	Woolery, Perry.....	Heltonville
1325	Wynne, R. E.....	Bedford

MADISON COUNTY

2154	Alexander, L. E.....	Pendleton
2440	Armington, Chas. L.....	Anderson
2606	Armington, John C.....	Anderson
2157	Austin, M. A.....	Anderson
423	Brauchla, C. H.....	Anderson
268	Brock, E. E.....	Anderson
1363	Charles, Etta.....	Anderson
257	Collins, A. W.....	Anderson
260	Conrad, E. M.....	Anderson
1360	Cotton, C. C.....	Elwood
2478	Cullipher, J. E.....	Elwood
262	Fattie, J. B.....	Anderson
259	Fleming, H. G.....	Anderson
264	Gante, H. W.....	Anderson
255	Garretson, W. M.....	R. R. 6, Anderson
159	Hall, J. E.....	Alexandria
2155	Harter, Wm. P.....	Anderson
90	Hoppenwrath, W. H.....	Elwood
91	Hoppenwrath, W. M.....	Elwood
1042	Hunt, Lee F.....	Anderson
266	Irwin, Seth.....	Summitville
424	Jones, H. E.....	Anderson
267	Jones, T. M.....	Anderson
1046	Keller, F. G.....	Alexandria

*Deceased.

1045	Kimball, Fred A.	Anderson	2025	Custer, A. T.	617 Hume-Mansur, Indianapolis
171	King, B. A.	Anderson	1211	Davis, John Q.	409 Rank Bldg., Indianapolis
1256	Long, James A.	Anderson	2473	Day, Clark E.	704 Bankers Trust, Indianapolis
1361	Martindale, H. C.	Pendleton	2122	Dean, M. F.	402 Hume-Mansur, Indianapolis
2159	Mayfield, C. H.	Perkinsville	2029	DeHass, T. W.	711 Hume-Mansur, Indianapolis
263	McDonald, V. G.	Anderson	1447	Doepfers, Wm.	610 Hume-Mansur, Indianapolis
258	McWilliams, O. E.	Anderson	2351	Dubois, Edward J.	238 E. Tenth St., Indianapolis
92	Meister, Doris	Anderson	2061	Duckworth, J. W.	Ft. Wm. McKinley, Rizal, Philippine Islands
1040	Mendenhall, F. F.	Elwood	2302	Dugan, Thos. J.	2538 W. Wash. St., Indianapolis
256	Metcalf, G. B.	Anderson	1615	Dunbar, Colin V.	424 H.-Mansur, Indianapolis
261	Miley, I.	Anderson	1252	Dunning, L. M.	1545 Roosevelt, Indianapolis
160	Miley, W. M.	Anderson	1446	Durham, Chas. O.	2035 Penn St., Indianapolis
1043	Mobley, L. F.	Summitville	1198	Earp, S. E.	634 Occidental Bldg., Indianapolis
94	Morris, C. F.	Anderson	1214	Eastman, J. R.	331 N. Delaware St., Indianapolis
170	O'Neill, T. J.	Anderson	1199	Eberwein, J. H.	720 Hume-Mansur, Indianapolis
1362	Otto, A. E.	Alexandria	1271	Edenharter, Geo. F.	Cent. Ins. Hos., Indianapolis
1365	Peck, W.	Frankton	1268	Erdman, Bernard	27 Willoughby, Indianapolis
422	Rinne, John I.	Lapel	2024	Edwards, Scott R.	1008 H.-Mansur, Indianapolis
2365	Schurtz, C. D.	Alexandria	1126	Egert, Stephen L.	468 Blake St., Indianapolis
1364	Sparks, W. R.	Pendleton	1108	Egbert, Jas.	226 Bankers Trust, Indianapolis
425	Thornburg, F. L.	Middletown	2301	Egbert, Roy	2601 Roosevelt Ave., Indianapolis
169	Tracy, J. R.	Anderson	1879	Emerson, Chas. P.	602 H.-Mansur, Indianapolis
2503	Walton, Charles A.	Anderson	1193	Emhardt, J. W.	1603 S. East St., Indianapolis
265	Williams, F. M.	Anderson	1116	Engle, Walter C.	2621 E. 25th St., Indianapolis
1044	Williams, L. O.	Anderson	2361	Ensminger, L. A.	614 H.-Mansur, Indianapolis
2158	Willson, S. C.	Anderson	1270	Ferguson, C. E.	412 E. 17th St., Indianapolis
1041	Whitledge, Geo. A.	Anderson	2203	Ferguson, K. W.	Cent. Ins. Hosp., Indianapolis
MARION COUNTY					
1738	Abbett, Frank E.	608 H.-Mansur, Indianapolis	1161	Fisk, Frank B.	116 E. 30th St., Indianapolis
1175	Adams, D. S.	521 Hume-Mansur, Indianapolis	1162	Fitch, Frank M.	226 Bank. Trust, Indianapolis
2474	Aikman, E. M.	901 I. O. O. F. Bldg., Indianapolis	1133	Foreman, Harry L.	3318 N. Capitol, Indianapolis
1251	Alburger, H. R.	404 Hume-Mansur, Indianapolis	1155	Foreman, Wm. H.	414 H.-Mansur, Indianapolis
2449	Allen, Horace R.	1843 N. Illinois, Indianapolis	1142	Fosler, D. W.	601 Hume-Mansur, Indianapolis
1607	Amos, E. M.	524 Hume-Mansur, Indianapolis	1266	Foxworthy, F. W.	1135 State Life, Indianapolis
1141	Anderson, D. A.	1214 Prospect St., Indianapolis	2304	Frazier, C. N.	509 Hume-Mansur, Indianapolis
1253	Anderson, J. C.	108 S. Audubon Rd., Indianapolis	1608	Funckhouser, Elmer	1301 Central, Indianapolis
1110	Anderson, R. J.	42 W. Denny St., Indianapolis	1059	Furniss, S. A.	401 N. Senate Ave., Indianapolis
1207	Aspy, J. A. M.	408 Hume-Mansur, Indianapolis	1132	Gabe, Harry E.	606 Hume-Mansur, Indianapolis
1430	Auble, C. S.	1415 Shelby St., Indianapolis	1874	Gabe, Wm. E.	712 Hume-Mansur, Indianapolis
1256	Ayers, A. S.	208 Bankers Tr. Bldg., Indianapolis	1261	Garrett, J. D.	Willoughby Bldg., Indianapolis
1219	Bahr, Max A.	Cent. Insane Hospital, Indianapolis	1183	Garrettson, J. A.	401 Hume-Mansur, Indianapolis
2153	Banister, R. F.	516 Pythian Bldg., Indianapolis	1172	Garshwiler, Wm. P.	Ind. Pythian, Indianapolis
1050	Barnes, I. C.	432 Newton-Claypool, Indianapolis	1143	Gatch, W. D.	605 Hume-Mansur, Indianapolis
1177	Barnhill, L. F.	721 K. of P. Bldg., Indianapolis	1260	Gaylord, H. G.	1066 Virginia Ave., Indianapolis
1083	Barry, M. Jos.	57 Willoughby Bldg., Indianapolis	1246	Gick, H. H.	2705 E. Michigan St., Indianapolis
1445	Bayer, Chas. F.	1617 Bellefontaine, Indianapolis	1426	Gutelius, C. B.	416 Bd. of Trade, Indianapolis
1101	Beasley, Thos. J.	427 Bankers Tr., Indianapolis	1066	Goar, Chas. S.	704 Bankers Trust, Indianapolis
1145	Beck, Flavius J.	3142 Central Ave., Indianapolis	1222	Graham, A. B.	Willoughby Bldg., Indianapolis
1429	Beck, Wm. S.	1831 N. Meridian St., Indianapolis	2057	Graham, Hannah	406 Kahn Bldg., Indianapolis
1131	Beckman, H. F.	513 Hume-Mansur, Indianapolis	1113	Graham, N. P.	1003 Hume-Mansur, Indianapolis
1265	Beeler, R. C.	714 Hume-Mansur, Indianapolis	1234	Gramling, J. J.	3328 Clifton St., Indianapolis
1148	Berauer, J. M.	1355 Madison Ave., Indianapolis	1929	Gundelfinger, B. M.	34 Willoughby, Indianapolis
1616	Berry, D. F.	710 Hume-Mansur, Indianapolis	2378	Guthrie, G. L.	Greenwood, Indianapolis
2530	Beveland, M. E.	3036 E. Wash. St., Indianapolis	2470	Habich, Carl	701 Hume-Mansur, Indianapolis
1259	Boaz, John J.	617 Bankers Trust, Indianapolis	1152	Hadley, Murray N.	608 H.-Mansur, Indianapolis
1237	Boggs, Wm. R.	R. R. E. Box 163, Indianapolis	1609	Harold, A. H.	500 Meridian Life, Indianapolis
2152	Bond, Geo. S.	2339 Central Ave., Indianapolis	1138	Harold, N. E.	435 Bankers Trust, Indianapolis
2120	Bonn, Harry K.	201 Pennway Bldg., Indianapolis	1197	Haslep, Marie	1815 College Ave., Indianapolis
2252	Bower, J. V.	3438 Orchard Ave., Indianapolis	1495	*Hoskins, W. D.	420 Hume-Mansur, Indianapolis
1077	Bowman, Geo. W.	816 E. Orange, Indianapolis	1236	Hatch, H. S.	Sunnyside Sanitarium, Oaklandon
1060	Boyle, Wm. V.	311 Hume-Mansur, Indianapolis	1129	Hatfield, J. H.	4925 E. Michigan St., Indianapolis
2579	Brayton, A. W.	636 Pythian Bldg., Indianapolis	1221	Hatfield, S. J.	409 I.O.O.F. Bldg., Indianapolis
1531	Brayton, Frank A.	328 Bank. Trust, Indianapolis	1069	Heinrichs, H. H.	740 Bankers Trust, Indianapolis
1428	Brill, James H.	608 N. New Jersey, Indianapolis	1147	Hendricks, R. G.	1003 H.-Mansur, Indianapolis
2044	Brown, B. A.	2423 Station St., Indianapolis	1062	Hetherington, A. M.	718 H.-Mansur, Indianapolis
1168	Brown, E. A.	1519 Pleasant St., Indianapolis	1094	Henry, Alfred	720 Hume-Mansur, Indianapolis
1267	Brubaker, E. H.	529 Bankers Trust, Indianapolis	1075	Hickman, W. F.	834 Marion Ave., Indianapolis
1735	Bull, J. H.	607 Kahn Bldg., Indianapolis	2379	Hoag, Wm. L.	2627 W. Wash. St., Indianapolis
1091	Burckhardt, Louis	621 H.-Mansur, Indianapolis	1242	Hobbs, Alice L.	5828 E. Wash. St., Indianapolis
1226	Burris, E. W.	2608 Michigan St. W., Indianapolis	1202	Hodges, Fletcher	717 H.-Mansur, Indianapolis
1225	Butler, R. A.	Beech Grove, Indianapolis	1180	Hofmann, J. Wm.	705 Ind. Pythian, Indianapolis
1127	Cabalzer, C. L.	508 Hume-Mansur, Indianapolis	1086	Hamer, Homer G.	723 H.-Mansur, Indianapolis
2027	Cahal, E. E.	2622 Shelby St., Indianapolis	1229	Hood, Thos. C.	1008 Hume-Mansur, Indianapolis
1212	Campbell, C. C.	Ft. McHenry, Baltimore, Md.	1067	House, J. W.	2150 Central Bldg., Indianapolis
1876	Canady, James W.	1229 Prospect, Indianapolis	2047	Hughes, J. E.	950 S. Meridian St., Indianapolis
1176	Caraway, S. H.	1810 Montcalm St., Indianapolis	1071	Hughes, Wm. F.	401 Hume-Mansur, Indianapolis
1165	Carmack, John W.	37 Willoughby, Indianapolis	1052	Humes, Chas. A.	Hume-Mansur, Indianapolis
1240	Carter, J. C.	507 Hume-Mansur, Indianapolis	1080	Hurt, Paul T.	406 Hume-Mansur, Indianapolis
1099	Carter, Larue D.	1820 E. 10th St., Indianapolis	2577	Hurty, John N.	State House, Indianapolis
1250	Chappell, R. S.	Trac. & Term. Bldg., Indianapolis	2059	Hutchins, Frank F.	1455 N. Penn., Indianapolis
1171	Christie, J. P.	424 Hume-Mansur, Indianapolis	1109	Hutcheson, G. A.	2206 E. Wash. St., Indianapolis
1065	Christian, G. R.	1717 Prospect St., Indianapolis	1248	Jackson, G. B.	603 Hume-Mansur, Indianapolis
1118	Clark, Edm. D.	712 Hume-Mansur, Indianapolis	1063	Jackson, Jesse L.	3001 E. 10th St., Indianapolis
1182	Clevenger, Wm. F.	403 Hume-Man., Indianapolis	1215	Jacobs, Harry A.	332 Bankers Tr., Indianapolis
1061	Coble, Geo. A.	New Augusta, Indianapolis	2554	Jaeger, A. S.	430 Bankers Trust, Indianapolis
2381	Coble, Ralph R.	2701½ College, Indianapolis	1241	Jameson, Henry	608 Hume-Mansur, Indianapolis
1181	Cole, Albert M.	712 Hume-Mansur, Indianapolis	1206	Jeffries, K. J.	Woessner Bldg., Indianapolis
1104	Combs, Geo. W.	417 Pennway Bldg., Indianapolis	2060	Jennings, Wm. L.	R. R. O. Box 75, Indianapolis
1185	Conway, Robert E.	319 Pyth. Bldg., Indianapolis	1216	Jobs, Norman E.	Trac. Ter. Bldg., Indianapolis
2422	Cook, Chas. J.	1107 I.O.O.F. Bldg., Indianapolis	1427	*Johnston, S. A.	624 Hume-Mansur, Indianapolis
2080	Copeland, S. J.	427 Bankers Trust, Indianapolis	2045	Johnson, Thomas B.	Ben Davis, Indianapolis
1186	Corya, H. W.	603 Hume-Mansur, Indianapolis	1532	Johnson, Wm. F.	314 Bankers Tr., Indianapolis
1454	Cottingham, C. E.	416 Bd. of Trade, Indianapolis	1097	Kahn, David L.	130 E. 22nd St., Indianapolis
2121	Courtney, Thomas E.	606 Pythian, Indianapolis	1274	Kast, Marie B.	1217 E. Vermont St., Indianapolis
1948	Craft, K. L.	226 Hume-Mansur, Indianapolis	1522	Kearby, D. O.	422 Amer. Cen. Life, Indianapolis
1058	Cregor, F. W.	724 Hume-Mansur, Indianapolis	1452	Keene, T. Victor	501 Hume-Mansur, Indianapolis
1949	Cox, Clifford E.	441 Highland Ave., Indianapolis	1379	Kelly, Walter F.	5503 E. Wash. St., Indianapolis
2079	Cox, Homer W.	2715 E. Wash. St., Indianapolis	1072	Kemper, Robt. J.	237 N. Noble St., Indianapolis
1154	Cunningham, J. M.	508 Hume-Man., Indianapolis		Kenneday, Bernays	50 Willoughby, Indianapolis

- 1218 Kennedy, Thos. C., 708 H.-Mansur, Indianapolis
 1927 Kennedy, Wm. H., 708 H.-Mansur, Indianapolis
 1055 Ketcham, Jane M., 513 H.-Mansur, Indianapolis
 1156 *Kimberlin, A. C., Willoughby Bldg., Indianapolis
 1224 Kime, E. N., 414 Hume-Mansur, Indianapolis
 1611 King, Mollie, 715 Third Ave., Eau Claire, Wis.
 1194 Kiser, Edgar F., 226 Hume-Mansur, Indianapolis
 1272 Kitchen, W. B., 706 Hume-Mansur, Indianapolis
 1159 Klein, F. C., 911 Virginia Ave., Indianapolis
 1282 Knox, Edwin S., 1404 Hoyt Ave., Indianapolis
 2576 Kohlstaedt, G. Wm., 2174 Madison, Indianapolis
 2471 Kurtz, F. B., 410 Occidental Bldg., Indianapolis
 1451 Kyte, Edwin G., 1714 Ruckle St., Indianapolis
 1239 Langdon, H. K., 403 Hume-Mansur, Indianapolis
 1173 Lapenta, Vincent A., 347 Bank Tr., Indianapolis
 1111 Iarkin, B. J., 703 Hume-Mansur, Indianapolis
 1532 Layman, D. W., 608 Hume-Mansur, Indianapolis
 1244 Leasure, J. Kent, 422 Am. Cen. Life, Indianapolis
 2573 Lee, D. F., 443 Bankers Trust Bldg., Indianapolis
 2420 Lemmon, H. J., Talley Bldg., Newport, Tenn.
 1119 Leonard, Henry S., 19th St. and College, Indianapolis
 1114 Lewis, J. R., Pine & Fletcher Ave., Indianapolis
 1117 Light, Mason B., 924 E. 63rd St., Indianapolis
 1238 Lindenmuth, E. O., 623 N. Penn. St., Indianapolis
 1610 Lingeman, Byron N., 408 Pennway, Indianapolis
 1158 Lingman, E. L., 408 Hume-Mansur, Indianapolis
 1228 Link, Goethe, 606 Pythian Bldg., Indianapolis
 1606 Little, J. W., 2635 E. Tenth St., Indianapolis
 1188 Little, W. D., 605 Hume-Mansur, Indianapolis
 1258 Lochry, Ralph L., 219 E. 17th St., Indianapolis
 1205 Lohrmann, H., Spdwj. & White Riv., Indianapolis
 1223 Long, J. B., 760 W. New York St., Indianapolis
 1877 Long, Wm. H., 402 N. West St., Indianapolis
 2380 Lukenbill, E. D., 219 Bankers Trust, Indianapolis
 1074 Lukenbill, O. C., 219 Bankers Trust, Indianapolis
 1174 MacDonald, J. A., 408 H.-Mansur, Indianapolis
 2472 MacGregor, Donald E., 2627 W. Michigan, Indianapolis
 1179 Magennis, H. L., 619 Occidental, Indianapolis
 1144 Malpas, Samuel H., 318 K. of P., Indianapolis
 1149 Mann, Frank C., Mayo Clinic, Rochester, Minn.
 1740 Marlatt, Clarence L., 704 Kahn Bdg., Indianapolis
 2535 Marshall, A. L., 520 Hume-Mansur, Indianapolis
 1057 Marshall, C. R., 1539 Illinois St., Indianapolis
 2305 Martin, Frank N., 517 H.-Mansur, Indianapolis
 2590 Martin, Paul, 11 B. Nanking Rd., Shanghai, China
 1883 Martz, Geo. J., 1273 Oliver Ave., Indianapolis
 1199 Marxer, Conrad W., 505 E. McCarty, Indianapolis
 1255 Masters, Robt. J., 422 H.-Mansur, Indianapolis
 1274 Maxwell, Leslie H., 408 H.-Mansur, Indianapolis
 1081 Mayer, F. W., 424 Hume-Mansur, Indianapolis
 1217 McAlexander, R. O., 740 Bank Tr., Indianapolis
 2058 McBride, Wm. A., Willoughby Bldg., Indianapolis
 1243 McCarty, P. W., 1928 W. Wash. St., Indianapolis
 1123 McCaskey, C. H., 422 Am. Cen. Life, Indianapolis
 2574 McCaskey, Geo. H., 422 Am. Cen. Life Bldg., Indianapolis
 1947 McConnell, M. W., Sullivan
 2421 McCool, John F., 1410 E. Wash. St., Indianapolis
 1380 McCormick, Chas. O., 414 Hume-Mansur Bldg., Indianapolis
 1150 McCown, P. E., 521 Hume-Mansur, Indianapolis
 1105 McCullough, C. B., 1135 State Life, Indianapolis
 1612 McFarlin, Chas. C., Castleton
 1053 McIntyre, Chas. J., 414 H.-Mansur, Indianapolis
 1098 McKittrick, Ora K., 325 Bd. of Tr., Indianapolis
 1931 McLeay, Jno. D., 157 W. Illinois St., Indianapolis
 2430 McMillan, F. G., 320 Pennway Bldg., Indianapolis
 1136 Mendenhall, A. M., 33 Bankers Tr., Indianapolis
 1269 Mercer, Oliver P., 536 Beville Ave., Indianapolis
 1928 Mertz, H. O., 723 Hume-Mansur, Indianapolis
 2429 Miller, Don L., 1631 Howard St., Indianapolis
 1085 Miller, J. Don, 513 Hume-Mansur, Indianapolis
 1739 Milliken, R. A., 613 Hume-Mansur, Indianapolis
 1167 Molt, Wm. F., 529 Bankers Trust, Indianapolis
 1189 Moon, V. H., 2105 N. Delaware St., Indianapolis
 2415 Moore, Ben B., 3307 N. Capitol Ave., Indianapolis
 1135 Moore, Robt. M., 521 Hume-Mansur, Indianapolis
 2553 Morgan, H. G., City Hall, Indianapolis
 2362 Morrison, Frank A., 40 Willoughby, Indianapolis
 1220 Morrow, Jos. E., 612 Hume-Mansur, Indianapolis
 2496 Morton, Walter P., 521 H.-Mansur, Indianapolis
 1068 Moschelle, J. D., 901 I.O.O.F. Bldg., Indianapolis
 1230 Mozingo, A. E., 720 Pythian Bldg., Indianapolis
 1096 Mueller, Lillian B., 4506 E. Wash., Indianapolis
 1139 Mumford, E. B., 408 Hume-Mansur, Indianapolis
 1160 Neier, Oliver C., 1225 Prera, San Antonio, Texas
 1284 Neely, A. S., 1110 Churchman St., Indianapolis
 1121 Neu, Chas. F., 608 Hume-Mansur, Indianapolis
 1056 Newcomb, John R., 410 H.-Mansur, Indianapolis
 1120 Nicodemus, J. P., 1105 N. Keystone, Indianapolis
 1153 Noble, Thos. B., 1008 Hume-Mansur, Indianapolis
 1064 Noble, Thos. B., Jr., 1008 H.-Mansur, Indianapolis
 2082 Nolting, H. F., 2446 Pierson Ave., Indianapolis
 1102 Norman, Olin B., 513 Hume-Mansur, Indianapolis
 1125 Ogle, Albert A., 226 Ind. Pyth. Bdg., Indianapolis
 1378 Oliver, J. H., 510 Hume-Mansur, Indianapolis
 1614 Orders, C. E., 836 W. 30th St., Indianapolis
 1184 Ottinger, R. C., 508 Hume-Mansur, Indianapolis
 1285 Overman, F. V., 508 Hume-Mansur, Indianapolis
 1737 Padgett, E. E., 424 Hume-Mansur, Indianapolis
 1151 Page, Lafayette L., 603 H.-Mansur, Indianapolis
 2026 Pantzer, H. O., 601 Hume-Mansur, Indianapolis
 1201 Peabworth, Aubrey C., 1228 Reissner, Indianapolis
 2477 Pennington, W. E., 414 H.-Mansur, Indianapolis
 1084 Peters, R. J. D., 3108 E. Mich. St., Indianapolis
 1134 Pettijohn, Fred L., 2460 Cen. Ave., Indianapolis
 1453 Pfaff, John A., 333 Bankers Trust, Indianapolis
 2360 Pfaff, O. G., 333 Bankers Trust, Indianapolis
 1169 Pfafflin, Chas. A., 445 Bankers Tr., Indianapolis
 1203 Quimby, Smith A., Camp Hustis Hospital, Lee Hill, Va.
 1450 Reed, Jewett V., 620 Hume-Mansur, Indianapolis
 1281 Repass, Robert E., 508 H.-Mansur, Indianapolis
 1210 Ricketts, J. W., 30 Willoughby Bldg., Indianapolis
 1235 Ridgeway, Ora W., 417 E. 16th St., Indianapolis
 1054 Rinker, Earl B., 620 H.-Mansur, Indianapolis
 1073 Rissler, Ross S., 2865 Clifton St., Indianapolis
 1100 Ritchey, J. Oscar, Long Hospital, Indianapolis
 1093 Robertson, J. F., 2313 E. Mich. St., Indianapolis
 1455 Robinson, Leigh F., 164 High, Hartford, Conn.
 1200 Robinson, Paul F., 1507 E. Wash., Indianapolis
 2363 Rogers, Clarke, 624 Hume-Mansur, Indianapolis
 1209 Ross, David, 416 Bd. of Trade Bldg., Indianapolis
 1157 Row, Geo. S., 905 Hume-Mansur, Indianapolis
 1873 Rowe, L. M., 538 N. Pennsylvania, Indianapolis
 2575 Royster, Wm. L., 803 I.O.O.F. Bldg., Indianapolis
 1051 Rudesill, C. L., 408 Hume-Mansur, Indianapolis
 1140 Ruddell, Karl R., 610 H.-Mansur, Indianapolis
 2476 Rubush, Guy Wm., 1716 E. Wash., Indianapolis
 1926 Rupel, Ernest, 419 Hume-Mansur, Indianapolis
 1191 Rutledge, Carl W., 1215 Kentucky, Indianapolis
 2431 Schaefer, C. R., Willoughby Bldg., Indianapolis
 1534 Schneider, A. J., 1664 S. Meridian, Indianapolis
 1088 Schweitzer, Ada E., 330 State House, Indianapolis
 1082 Seifres, John G., 212 Stewart Pl., Indianapolis
 2312 Segar, Louis H., 226 Hume-Mansur, Indianapolis
 1070 Sessions, Kenosha, R. R., Box 1, Indianapolis
 2475 Sharp, Harry Clay, 58 Vendosa Apt., 1st and 3rd St. N. W., Washington, D. C.
 1078 Sharp, Walter N., 711 H.-Mansur, Indianapolis
 1187 Sheridan, A. J., 1647 Lexington, Indianapolis
 2081 Shimer, Wm., State Bd. of Health, Indianapolis
 1381 Shuler, Lacey L., 510 H.-Mansur, Indianapolis
 2578 Siersdorfer, T. N., 120 Garfield Ave., Indianapolis
 2313 Sluss, John W., 226 Bankers Trust, Indianapolis
 1884 Smiley, Orvall, 219 Bankers Trust, Indianapolis
 1122 Smith, James M., 3026 E. 10th St., Indianapolis
 1208 Smith, Martha J., 2149 N. Penn. St., Indianapolis
 1178 Smith, Roy Lee, 619 Occidental, Indianapolis
 1245 Solomon, R. A., 425 E. 30th St., Indianapolis
 2314 Sowder, Chas. R., 408 Pennway, Indianapolis
 1932 Spencer, M. J., 2719 E. Wash. St., Indianapolis
 1195 Spink, Mary A., 1140 E. Market St., Indianapolis
 1196 Spink, Urbana, 1140 E. Market St., Indianapolis
 1283 Spath, Carl B., 20 Willoughby Bdg., Indianapolis
 1247 Stayton, Chester A., 511 Merid. Life, Indianapolis
 1227 Steele, M. F., Hope-Methodist Hosp., Fort Wayne
 1213 Sterne, A. E., 1820 E. 10th St., Indianapolis
 1213 Stevens, O. L., Cen. Insane Hosp., Indianapolis
 1736 Stillson, Jos. O., 716 Pythian Bldg., Indianapolis
 1095 Stockton, Sarah, Cen. Insane Hosp., Indianapolis
 1279 Storch, L. A. E., 1139 S. Meridian, Indianapolis
 1130 Storms, Roy B., 311 Hume-Mansur, Indianapolis
 2083 Strickland, C. R., 207 Hume-Mansur, Indianapolis
 1087 Sullivan, Thos. L., 55 Willoughby, Indianapolis
 1076 Sutcliff, J. A., 155 E. Market St., Indianapolis
 1192 Talbott, John H., 402 Union Station, Indianapolis
 1263 Taylor, James H., 618 H.-Mansur, Indianapolis
 1280 Terrell, B. J., 5523 E. Wash. St., Indianapolis
 1444 Thomas, E. C., 209 Bankers Trust, Indianapolis
 1257 Thrasher, J. R., 710 Ind. Pythian, Indianapolis
 2046 Thayer, Jos. O., 422 Hume-Mansur, Indianapolis
 1875 Thurston, A. L., Willoughby Bldg., Indianapolis
 1275 Thurston, H. S., 43 Willoughby, Indianapolis
 2028 Tinney, Wm. E., 416 Bd. of Trade, Indianapolis
 1107 Todd, Robt. N., 1723 Capitol Ave., Indianapolis
 1164 Tomlin, Wm. S., 520 Hme-Mansur, Indianapolis
 1090 Torian, Oscar N., 621 H.-Mansur, Indianapolis
 1106 Truitt, Frank L., 306 Pennway Bdg., Indianapolis
 1146 Van Osdol, Harry A., 314 Bd. of Tr., Indianapolis
 1264 Voyles, Chas. F., 803 I.O.O.F. Bldg., Indianapolis
 1103 Wagner, Herbert T., 1002 I.O.O.F., Indianapolis
 1112 Wales, E. DeWolfe, 620 H.-Mansur, Indianapolis
 1882 Walker, Frank C., 414 H.-Mansur, Indianapolis
 1166 Walker, H. A., 416 Bd. of Trade, Indianapolis
 1930 Walters, Arthur L., Ell Lilly & Co., Indianapolis
 1262 Watters, P. J., 1802 Ingram St., Indianapolis
 1278 Ward, Clay L., No. 1 Fair Bldg., Indianapolis
 1741 Warfel, F. C., Willoughby Bldg., Indianapolis
 1875 Weer, Harry H., 705 Hume-Mansur, Indianapolis
 1231 Wehrman, J. O., 804 Hume-Mansur, Indianapolis
 1276 Weil, Harry J., 2101 E. Michigan, Indianapolis
 1137 Weller, Chas. A., 614 Hume-Mansur, Indianapolis
 1092 Wells, Geo. M., 2126 College Ave., Indianapolis
 1079 Weyerbacher, A. F., 716 Ind. Pyth., Indianapolis
 1170 Wheeler, Homer H., 311 H.-Mansur, Indianapolis

1431	Wheeler, J. T., Flat B, Kenilworth Apts., Indianapolis
1880	Whitaker, Joel, 305 Hume-Mansur, Indianapolis
1249	White, John A., 1002 I.O.O.F. Bdg., Indianapolis
1613	Whitehead, J. M., 1540 Roosevelt, Indianapolis
1233	Williams, Luther, 232 Bankers Tr., Indianapolis
1881	Wilson, A. L., 420 Hume-Mansur, Indianapolis
1163	Wishard, Wm. N., 723 H.-Mansur, Indianapolis
1128	Wood, G. W., 2815 Clifton St., Indianapolis
1254	Woodbury, H. E., 32 E. 32nd St., Indianapolis
1232	Woods, C. S., 3129 N. Delaware St., Indianapolis
1742	*Woolen, G. V., Am. Cen. Life Bldg., Indianapolis
1273	Wright, J. Wm., 610 Hume-Mansur, Indianapolis
1204	Wynn, Frank B., 421 Hume-Mansur, Indianapolis
1089	Young, James B., Cumberland

MARSHALL COUNTY

1779	Denison, R. C., Bremen
1786	Draper, R. H., Bremen
1781	Eley, L. D., Plymouth
1782	Eley, T. C., Plymouth
2521	Fuller, W. H., Plymouth
1775	Graham, C. R., Bourbon
1780	Holtzendorff, Chas. F., Plymouth
1787	Kelly, Frank H., Argos
1789	Kendall, John T., Argos
1791	Knott, Harry, Plymouth
1777	Loring, Samuel C., Plymouth
2520	Mackey, C. G., Culver
1792	Marshall, George L., Bourbon
1776	Radcliff, Floyd E., Bourbon
1788	Reed, Chas. E., Culver
1785	Sarber, Wallace C., Argos
2329	Schilt, T. S., Piercetown
1784	Shipley, John B., LaPaz
1783	Stephens, R. C., Plymouth
1778	Tallman, Homer H., Culver
1790	Thompson, Alfred A., Tyner
2585	Wiseman, B. W., Culver

MARTIN COUNTY

2100	Hays, Thomas A., Burns City
2049	Long, Edward E., Shoals
2056	Michaels, Jos. F., Loogootee
2055	Robinson, Geo. M., Loogootee
2350	Strange, John Wm., Loogootee

MIAMI COUNTY

2092	Andrews, E. H., Peru
2093	Brookie, R. W., Converse
2087	Carlson, E. A., Peru
2176	Eikenberry, B. F., Peru
2089	Freeze, J. A., Bunker Hill
2292	Griswold, E. H., Peru
2175	Haas, Homer C., Peru
2347	Jordan, Cecil, Peru
2300	Kalbfleisch, A. H., Mercedes, Texas
2346	Kratzer, Eugene F., R. R., Bennet's Switch
2348	Line, H. E., Chili
2096	Lynn, F. M., Peru
2099	Malouf, S. D., Peru
2178	Malsbury, L. O., Peru
2100	McDowell, M. A., Peru
2095	Newell, A. S., Converse
2293	Rendel, Chas. F., Mexico
2097	Resler, F. L., Upland
2091	Ridenour, D. C., Peru
2090	Taylor, M. H., Macy
2098	Van Mater, Geo. G., Peru
2088	Wagner, M. L., Peru
2291	Wainwright, O. C., Peru
2177	Wallace, L. S., Bunker Hill
2094	Waynre, E. S., Denver
2533	Yarling, John E., Peru

MONROE COUNTY

2118	Austin, F. H., Bloomington
738	Batman, F. H., 214 E. Fifth St., Bloomington
739	Culmer, W. N., 311 E. Fifth St., Bloomington
746	Hachat, F. I. J., Indiana Univ., Bloomington
2528	Harris, C. E., Bloomington
747	Harris, O. K., Ellettsville
742	Harris, W. W., Henry Kerr Bldg., Bloomington
734	Holland, G. F., 108 W. Seventh St., Bloomington
737	Holland, J. E. P., Box 16., Bloomington
741	Kentling, Jos., 201 S. College St., Bloomington
2116	Luzadder, J. E., Bloomington
2527	Mitchell, G. L., Smithsville
745	Morris, O. M., S. College St., Bloomington
2427	Moser, Joseph E., Bloomington
736	Myers, B. D., 321 N. Wash. St., Bloomington
2117	Reed, Wm. C., Bloomington
735	Smith, R. D., 120 E. Sixth St., Bloomington
744	Stroup, Chas. C., 107 E. Fifth St., Bloomington
733	Tourner, F. F., 311 S. College St., Bloomington
2130	Tourner, John P., Bloomington
743	Whetsell, L. E., Whetsel San., Bloomington
740	Wiltshire, J. W., 1st Nat'l Bank, Bloomington
980	Woolery, Homer, Gentry Bldg., Bloomington

MONTGOMERY COUNTY

671	Ball, T. Z., Waveland
1527	Barcus, Paul J., Crawfordsville
669	*Batman, Wm. F., Crawfordsville
2278	Beatty, James L., Crawfordsville
2199	Bounnell, Harry M., Waynetown
2602	Clements, Geo. E., Crawfordsville
1524	Cooksey, Thomas L., Crawfordsville
2198	Davidson, J. Frank, Crawfordsville
2274	Dennis, Fred A., Crawfordsville
1529	Etter, Jacob R., Crawfordsville
2276	Ewell, Wardlaw, Crawfordsville
2500	Faulkner, Albert S., Waynetown
1528	Gott, W. T., Crawfordsville
2255	Green, Henry E., Crawfordsville
2448	Griffith, J. B., Alamo
2275	Griffith, Thos. J., Crawfordsville
2597	Howard, Chester W., Crawfordsville
2197	Hutchings, B. F., Crawfordsville
674	Lidikay, E. C., Ladoga
673	Loop, A. L., Crawfordsville
2279	Peacock, N. F., Darlington
2257	Peacock, S. R., Ladoga
2375	Pollom, Robert R., Darlington
672	Ristine, W. H., Crawfordsville
2277	Satterlee, A. R., Crawfordsville
2256	Schenck, Faye O., Crawfordsville
1526	Sigmond, Harvey W., Crawfordsville
2426	Swope, Austin A., Crawfordsville
670	Williams, Geo. T., Crawfordsville
1525	Wolfe, J. P., Crawfordsville

MORGAN COUNTY

1847	Bothwell, C. G., Martinsville
2595	Bradley, John S., Hall
2599	Egbert, Robert H., Martinsville
1851	*Green, E. V., Martinsville
2352	Robinson, Frank C., Martinsville
1850	Robinson, H. C., Martinsville
1848	Sandy, W. J., Martinsville
2180	Seaton, G. W., 620 Bankers Trust, Indianapolis
2559	Spoor, J. S., Brooklynn
1846	Swan, D. H., Paragon
1849	Sweet, E. M., Martinsville
2283	Thompson, Wm. L., Mooresville
2502	White, Claude H., Mooresville
2409	Whiting, C. G., Martinsville

NOBLE COUNTY

1544	Black, Frank W., Ligonier
1540	Carver, Walter F., Albion
1546	Gardner, C. A., Kendallville
1551	Gilbert, Joseph L., Kendallville
1537	Goodwin, Columbus B., Kendallville
1543	Hardy, Chas. F., Kendallville
1541	Hayes, John W., Albion
1542	Hayes, Woodard H., Albion
1548	Hursey, Virgil G., Ligonier
1552	Lane, C. D., Ligonier
2571	Lawson, I. H., Kendallville
1547	Luckey, James E., Wolf Lake
1538	Morr, John W., Albion
1545	Munk, C. E., Kendallville
1549	Nye, John H., Cromwell
1550	Pulskamp, B., Rome City
1536	Ravenscroft, John H., Albion
1724	Seymours, Calvin A., Wawaka
1953	Shobe, Wm. A., Ligonier
1604	Veazey, Wm. M., Avilla
1539	Williams, H. O., Kendallville

ORANGE COUNTY

439	Arthur, F. D., West Baden
434	Baker, R. E., Orleans
430	Boyd, C. E., West Baden
442	Colglazier, G. G., Leipsic
431	Dillinger, J. R., 32 N. 36th St., Philadelphia, Pa.
1748	Hammond, F. E., French Lick
437	Hassenmiller, M., West Baden
428	Hoggatt, W. W., French Lick
433	Holaday, R. L., Paoli
429	Lindley, Laban, Paoli
435	Maris, J. I., Paoli
427	Miller, H. L., West Baden
2127	Mowry, Wm. A., 2158 Grandin Rd., Cincinnati, O.
441	Patton, W. H., Orleans
2565	Sicks, O. Wilbur, French Lick
438	Sloan, W. W., French Lick
432	Stewart, O. H., Orleans
436	Teaford, S. F., Paoli
440	Wilson, D. S., French Lick
2253	Workman, Wm. S., Orleans

OWEN COUNTY

450	Dutton, H. H., Spencer
449	Gray, O. F., Spencer
2266	Hazel, Jas. T., Freedom
4	Kennedy, A. C., Patrickburg
2416	McLure, Robert L., Gosport
1415	McQueen, Wm., Oaklandon

6	Pierson, Allen	Spencer
448	Sloan, J. N.	Spencer
451	Stevens, J. V.	Spencer
5	Williams, F. A.	Quincy
452	Yocum, Boaz	Coal City

PARKE-VERMILLION COUNTIES

180	Bloomer, J. R.	Rockville
1642	Caplinger, Chas. A.	Wallace
177	Collings, T. J.	Rockville
181	Connelly, J. J.	Rockville
2695	Darrock, S. C.	Cayuga
173	Dooley, R. L.	Montezuma
2324	Evans, Everett M.	Mecca
174	Martin, A.	Bellmore
176	Myers, W. C.	Dana
179	Noblitt, J. S.	Bellmore
182	Peare, R. C.	Rockville
2034	Rhein, A. E.	Rosedale
175	Sabin, Albert E.	Dana
183	Warren, Bradford	Marshall
1641	White, Chester S.	Rosedale
178	Williamson, A. A.	Marshall

PERRY COUNTY

1293	Conner, D. S.	Cannelton
1290	Coultas, I. J.	Tell City
1292	Glenn, Fred C.	Tell City
1288	Hargis, W. T.	Tell City
1286	James, N. A.	Tell City
2309	Lee, John H.	Rome
1291	Muelchi, Wm. H.	Tell City
1287	Schriefer, E. E.	Cannelton
1289	Snyder, Earl R.	Troy
231	Taylor, J. E.	Leopold

PIKE COUNTY

1919	Basinger, T. W.	Petersburg
1922	Bethel, Wm. J.	Winslow
2325	Byers, O. A.	Petersburg
1925	Clark, S. R.	Petersburg
2327	Corn, Nathaniel	Velpen
2540	DeTar, Geo. B.	Winslow
1923	Goodwin, L. D.	Winslow
1917	Hunter, Walter M.	Petersburg
1924	Imel, Edward S.	Ft. Bayard, N. M.
1918	Kime, John T.	Petersburg
1921	Logan, A. R.	Petersburg
2328	McGlasson, T. D.	Winslow
1920	Rice, T. R.	Petersburg
2326	Taylor, Daniel E.	Velpen

PORTER COUNTY

1656	Axe, Ross A.	Chesterton
1650	Blount, R. D.	Valparaiso
1651	Cook, H. S.	Valparaiso
1649	DeWitt, C. H.	Valparaiso
1647	Dittmer, Samuel E.	Kouts
1653	Dobbins, A. O.	Wheeler
1644	Douglas, Geo. R.	Valparaiso
1654	Fyfe, M. B.	Valparaiso
1646	Gowland, H. E.	Valparaiso
1655	Hayward, Harry B.	Valparaiso
2243	Kleinman, F.	Hebron
2264	Leatherman, Anderson P.	Valparaiso
1652	Noland, P. D.	Kouts
1645	Powell, E. H.	Valparaiso
2265	Ryan, John A.	Valparaiso
1648	Seipel, H. O.	Valparaiso
1643	Stoner, G. H.	Valparaiso
2262	Wiltfong, Chas. O.	Chesterton

POSEY COUNTY

1369	Arburn, Chas.	Wadesville
2499	Doerr, John E.	Mt. Vernon
2531	Fitzgerald, Kelly C.	New Harmony
1725	Fullenwider, C. H.	Mt. Vernon
1854	Gudgel, J. E.	Cynthiana
1726	Hardwick, R. L.	Mt. Vernon
1518	Miller, Wm. L.	Wadesville
1519	Montgomery, S. B.	Cynthiana
2532	Ramsey, Douglas C.	New Haven, Ill.
1370	Ranes, J. R.	Mt. Vernon
1390	Rawlings, C. L.	New Harmony
1904	Turman, Ira L.	Cynthiana
1391	Wilson, Thomas W.	New Harmony
1520	Woods, Arba L.	Poseyville

PULASKI COUNTY

18	Campbell, C. S.	Winamac
19	Campbell, G. W.	Winamac
21	Carneal, Thomas E.	Winamac
2364	Ives, Raymond J.	Francesville
22	Johnston, E. E.	Star City
23	Kelsey, A. J.	Monterey
2560	Linton, Chas. E.	Medaryville
17	Thompson, G. W.	Winamac
20	Thompson, W. H.	Winamac
16	Washburn, G. W.	Star City

PUTNAM COUNTY

1730	Collins, Clement C.	Roachdale
1732	Corn, Wm. D.	Bainbridge
2299	*Cully, John F.	Bainbridge

*Deceased.

693	Gillespie, J. F.	Greencastle
694	Hawkins, E.	Greencastle
692	Hope, C. F.	Greencastle
1596	Horn, Amos H.	Putnamville
1731	Hurst, E. M.	Cloverdale
696	Hutcheson, W. R.	Greencastle
697	Lemon, B. E.	Fillmore
701	McGaughey, W. M.	Greencastle
698	Moser, W. A.	Coatsville
1853	New, Y. N.	Roachdale
1595	Preston, Jos. L.	Cloverdale
1733	Stroube, Chas. N.	Roachdale
700	Tucker, C. C.	Greencastle
695	Tucker, W. W.	Greencastle
691	Wood, N. S.	Greencastle
1852	Wright, U. A.	Coatsville
699	Zaring, C. T.	Greencastle

RANDOLPH COUNTY

111	Botkins, Chas. L.	Farmland
108	Brenner, Ivan E.	Winchester
2442	Brooks, Emory W.	Farmland
101	Chenoweth, F. A.	Winchester
1449	Cox, Cyrus R.	Lynn
102	Current, O. E.	Farmland
105	Davis, Geo. H.	Union City
2529	Detrick, H. W.	Union City
114	Henderson, A.	Ridgeville
107	Hunt, B. S.	Winchester
2320	Kramer, J. A., 109 Terminal Bldg.	Norfolk, Va.
106	Markle, Grant C.	Winchester
420	Martin, C. E.	Carlos
104	Milligan, C. E.	Winchester
116	Mullikin, C. W.	Ridgeville
109	Moreney, J. H.	Winchester
172	Nixon, John	Farmland
113	Reid, Robert Wm.	Union City
112	Reynard, E. G.	Union City
688	Rine, E. W.	Winchester
117	Robison, J. S.	Winchester
1335	Rogers, A. C.	Parker
103	Ruby, Fred McK.	Union City
1603	Spitler, Chas. E.	Saratoga
115	Wallace, John M.	Lynn
110	Zeller, F. Arthur	Union City

RIPLEY COUNTY

1939	Coomes, M. Jos.	Versailles
1816	Cox, Lafayette T.	Osgood
1814	Freeman, Edward D.	Osgood
1815	Hess, John N.	New Marion
2561	Holton, C. E.	Holton
1813	McClure, Jesse R.	Milan
1817	*Olmstead, R. T.	Versailles
2450	Fate, J. R.	Milan
2488	Whitlatch, Bine	Milan
2489	Whitlatch, Irving A.	Milan
2194	Wilson, Florence O.	Versailles

RUSH COUNTY

952	Bowen, J. F.	Rushville
962	Green, F. H.	Rushville
949	Green, L. M.	Rushville
1439	Hackleman, Frank G.	Rushville
957	Hume, E. L.	Milroy
950	Kennedy, R. O.	Rushville
958	Lampton, W. T.	Milroy
951	Lee, J. M.	Rushville
954	Logan, H. V.	Rushville
2122	Metcalf, Henry P.	New Salem
963	Faxton, J. T.	Rushville
961	Sexton, J. C.	Rushville
953	Sexton, M. C.	Rushville
959	Smith, Wm. C.	Rushville
956	Smuller, C. L.	Mays
955	Van Osdol, D. D.	Rushville
955	Wooden, E. I.	Rushville

SAINT JOSEPH COUNTY

939	Abel, J. A., 122 W. Division St.	South Bend
903	Allen, G. B., 308 J.M.S. Bldg.	South Bend
1474	Baer, Samuel W., J.M.S. Bldg.	South Bend
929	Baker, W. H., 122 N. Lafayette St.	South Bend
2536	Bartlett, Clifford L., R. R. 2	Mishawaka
2501	Bartlett, F. Herbert, Healthwin Hospital,	South Bend
926	Berteling, J. B., W. Colfax Ave.,	South Bend
1473	Boone, John C., Dean Bldg.	South Bend
1468	Borley, Edgar R., 404 J.M.S. Bldg.,	South Bend
1475	Borley, W. E., 118 N. Church St.,	Mishawaka
904	Bosenbury, C. S., 111 N. Lafayette,	South Bend
930	Bostwick, J. G., 117 S. Main St.	Mishawaka
891	Boyd-Snee, H., 514 J.M.S. Bldg.	South Bend
911	Bussard, C. F., 536 Farmers Trust,	South Bend
914	Christophel, W. B., 109 W. Third St.,	Mishawaka
910	Clapp, Fred R., 122 N. Lafayette St.,	South Bend
901	Clark, S. A., 314 J.M.S. Bldg.	South Bend
1479	Cook, Wm. M., Citizens Trust Bldg.,	South Bend
1480	Cooper, Harry L., Farmers Trust,	South Bend
918	Crowe, H. M., W. Colfax Ave.	South Bend
931	Crumpacker, C. B., Farmers Trust,	South Bend
1487	DeForrest, Daniel F., Dean Bldg.	South Bend

933	Denaut, M. S.	Walkerton
900	Dresch, C. A., 118 S. Mill St.	South Bend
932	Dugdale, R. B., 305 W. Jefferson	South Bend
1472	Dugdale, Thomas A., 117 Mills Bldg.	Mishawaka
1470	Duggan, James A., 315 Union Bldg.	South Bend
1484	Eastman, Fred P., 330 S. Main St.	South Bend
898	Eisenbeiss, C. M., 613 J.M.S. Bldg.	South Bend
927	Farnham, W. C., 304 Citizens Bank	South Bend
915	Fears, J. H., 116 S. Williams St.	South Bend
895	Fish, C. M., 135 S. Lafayette St.	South Bend
943	Gammack, A. P. F., Dean Bldg.	South Bend
897	Geisler, Geo. J., 303 Dean Bldg.	South Bend
1489	Graham, Henry J.	Mishawaka
892	Gorden, J. M., 724 J.M.S. Bldg.	South Bend
1466	Hager, Walter A., 111 N. Lafayette	South Bend
894	Hall, H. M.	New Carlisle
925	Hardy, John J.	North Liberty
899	Helman, H. W., 133 S. Lafayette St.	South Bend
921	Hill, J. W., 136 N. Lafayette St.	South Bend
1467	Hillman, W. H., 513 Farmers Trust	South Bend
934	Huffman, A. D., 127 S. Lafayette St.	South Bend
936	Hutchinson, B. M., Mills Blvd.	Mishawaka
1482	Knapp, Arthur L., 248 Farm. Trust	South Bend
909	Kramer, A. A., 1519 S. Miami St.	South Bend
913	Lent, E. J., 122 N. Lafayette St.	South Bend
941	Lindquist, N. S., 401 Farm. Trust	South Bend
912	Lyon, Martha B., 214 LaPorte Ave.	South Bend
908	Lyon, M. W., Jr., 122 N. Lafayette	South Bend
1476	McMeel, James E., 415 Farmers Tr.	South Bend
2439	Mikesch, Wm. H., 322 Farmers Tr.	South Bend
1477	Miller, Hugh M., 122 N. Lafayette	South Bend
920	Miller, M. K., 122 N. Lafayette St.	South Bend
907	Miranda, W. F.	Walkerton
938	Mitchell, H. F., 132 N. Lafayette	South Bend
1483	Montgomery, Hugh T., Dean Bldg.	South Bend
935	Moore, E. P., 129 W. Colfax Ave.	South Bend
1488	Myers, C. H., 127 N. Lafayette St.	South Bend
1465	Myers, Edgar H., 127 S. Lafayette	South Bend
919	Olney, T. A., 415 Farmers Trust	South Bend
893	Owen, W. L., 509 Farmers Trust	South Bend
1471	Parker, Edward E., Farmers Trust	South Bend
1600	Pelz, M. D., 302 S. Michigan St.	South Bend
937	Preston, H. C., 303 W. Jeff. Blvd.	South Bend
1490	Proutfit, Lewis	Oscola
928	Sandock, Isadore, 436 Farm. Trust	South Bend
1486	Savery, C. E., 126 N. Lafayette St.	South Bend
917	Sensenich, R. L., 205 J.M.S. Bldg.	South Bend
905	Shanklin, R. C., 316 Union Trust	South Bend
2111	Shedd, Hugh B.	New Carlisle
1599	Sparks, A. J., 304 S. Michigan Ave.	South Bend
1481	Sprague, John S., 415 Dean Bldg.	South Bend
1598	Squires, David E., 307 Citizens Bank	South Bend
924	Stoltz, Charles, 311 W. Jeff. Blvd.	South Bend
1485	Swantz, Thos. J., 424 Farm. Trust	South Bend
940	Terry, C. C., 122 N. Lafayette St.	South Bend
916	Travers, P. C., 542 Farmers Trust	South Bend
1464	Van Rie, Leo P., 315 S. Taylor St.	Mishawaka
906	Varier, J. A., 135 S. Lafayette St.	South Bend
942	Vickery, Chas. R., 310 J.M.S. Bldg.	South Bend
1478	Vitou, Henry E., 739 S. Michigan	South Bend
1469	Von Barandy, Oscar, 402 S. Chapin	South Bend
896	Wegner, W. G., 307 Un. Trust Bldg.	South Bend
902	Wickam, W. A., 507 J.M.S. Bldg.	South Bend
923	Wilson, J. L., Farmers Trust Bldg.	South Bend
922	Wyland, B. J., 517 N. Main St.	Mishawaka

SCOTT COUNTY

537	McLain, W. L.	Scottsburg
539	Walker, J. H.	Scottsburg
538	Wilson, J. P.	Scottsburg

SHELBY COUNTY

1934	Bass, Frank E.	Shelbyville
567	Carter, Laura	Shelbyville
572	Coulson, S. B.	Waldron
568	Green, Thomas G.	Shelbyville
569	Keeling, J. E.	Waldron
565	Kennedy, S.	Shelbyville
1392	McFaddin, Walter C.	Shelbyville
2376	Patton, Vernon C.	Morristown
566	Parrish, J. W.	Shelbyville
2052	Perry, Chas. H.	Lewis Creek
571	Randolph, D. F., 809 N. Alabama	Indianapolis
1442	Ray, Franklin E.	Shelbyville
2140	Saamons, Leslie C.	Shelbyville
1933	Schooley, W. C.	Waldron
570	Snider, J. W.	Fairland

SPENCER COUNTY

857	Atchison, K. C.	Rockport
847	Buxton, Eva J.	Rockport
849	Ehrman, C. D.	Rockport
851	Glackman, J. C.	Rockport
852	Gwaltney, S. P.	Lake
848	Harter, H. T.	Newtonville
856	Lang, S. C.	Rockport
853	Lomax, Claude C.	St. Meinrad
850	Medcalf, N. L.	Lamar
854	Schweizer, J. J.	Santa Claus
859	Stuteville, S. W.	Grandview
855	Thompson, A. B.	Lake
858	Williams, W. H.	Dale

STEBEN COUNTY

869	Blosser, B. A.	Fremont
2113	Cameron, Don Franklin	Hamilton
1729	Cameron, J. F.	Hamilton
862	Creel, T. J.	Angola
865	Frazier, S. S.	Angola
864	Humphreys, F. B.	Angola
860	Kimmel, A. J.	Hudson
1728	Lake, Geo. N.	Pleasant Lake
866	Lane, W. H.	Angola
867	Nichols, H. A.	Angola
863	Ritter, Mary T.	Angola
1727	Sutherland, P. Norman	Angola
861	Swantusch, O. H.	Angola
1513	Wade, Robert L.	Fremont
868	Waller, W. F.	Angola
2269	Wood, T. F.	Angola

SULLIVAN COUNTY

67	Asbury, C. W.	Hymera
75	Bailey, W. A.	Carlisle
2298	Bedwell, T. S.	Dugger
65	Billman, B. I.	Sullivan
71	Billman, J. M.	Sullivan
2074	Bland, H. E.	Fairbanks
73	*Boone, F. C.	Merom
64	Briggs, C. F.	Sullivan
1448	Corbin, E. M.	Sullivan
63	Crowder, J. R.	Sullivan
2295	Deputy, W. M.	Dugger
2297	Dukes, F. M.	Dugger
2123	Freeman, Joseph	Sullivan
2296	Gill, Ira J.	Dugger
2321	Higbee, Paul	Dugger
614	Lisman, J. W.	Sullivan
2121	Maple, James B.	Sullivan
72	Neff, J. H.	Sullivan
2076	O'Dell, Harry	Farmersburg
2075	Oliphant, J. T.	Farmersburg
2125	Parker, John J.	Merom
68	Pirtle, G. W.	Carlisle
2294	Robards, E. E.	Shelburn
70	Scott, G. D.	Sullivan
62	Thompson, W. N.	Sullivan
74	Thralls, C. U.	Hymera
2077	*Van Cleave, R. H.	Farmersburg
66	Walters, E. R.	Faxton
69	Whipps, C. E.	Carlisle
2437	Wrook, John H.	Shelburn

SWITZERLAND COUNTY

393	Bear, L. H.	Vevay
395	Copeland, G. W.	Vevay
394	Copeland, R. M.	Vevay
2546	Potter, Benj. S.	East Enterprise
2290	Searcy, B. N.	Patriot
396	Shadday, J. H.	Vevay
398	Thieband, H. M.	Vevay
397	Ward, J. P.	Vevay

TIPPECANOE COUNTY

982	Ackerman, A. C.	Lafayette
983	Arnett, A. C.	Lafayette
984	Bauer, A. J.	Lafayette
985	Beasley, Geo. F.	Lafayette
986	Biddle, F. M.	Battle Ground
987	Burkle, John C.	Lafayette
2310	Butler, Wm. F.	Cayuga
988	Campbell, R. M.	Lafayette
989	Chenoweth, O. U.	Lafayette
990	Coyner, A. B.	Lafayette
991	Crockett, F. S.	Lafayette
993	Davison, Carl V.	West Lafayette
992	Davidson, E. C.	Lafayette
994	Driscoll, C. C.	Lafayette
996	Griest, O. E.	Lafayette
997	Hannell, R. V.	Lafayette
998	Hillis, James D.	Lafayette
999	Hiner, F. T.	West Lafayette
1000	Hunter, Frank F.	Lafayette
1001	Hupe, Charles	Lafayette
1002	Ikins, Roy G.	Lafayette
1003	Keiper, Geo. F.	Lafayette
1004	Kern, Chas. B.	Lafayette
1005	Lairy, M. M.	Lafayette
1006	Laws, H. J.	Lafayette
1007	Lee, Geo. W., 3443 Lyleburn Pl., Cincinnati, Ohio	Lafayette
1008	Levering, Guy P.	Lafayette
1009	Loop, F. A.	Lafayette
1010	McBride, Wm. F.	Dayton
1011	McCay, Ora I.	Romney
1012	McClelland, D. C.	Lafayette
1013	McMahan, Adah	Lafayette
1014	Mitchell, E. T.	Lafayette
1016	Moffitt, Wm. R.	West Lafayette
995	Moore, Wm. H. H.	West Lafayette
1015	Morgan, A. E.	Lafayette
1017	Morrison, J. S.	Lafayette
1521	Mugg, Henry W.	Clarks Hill
1018	Pearlman, S. S.	Lafayette
1019	Pyke, F. L.	Lafayette

1020	Reser, Wm. M.	Lafayette	2213	Linthicum, P. H., Upper 2nd St.	Evansville
1021	Romberger, F. T.	Lafayette	127	Long, E. B., 1021 1st Ave.	Evansville
2254	Rowland, C. L.	West Point	143	Iorenz, J. W., 1007 W. Franklin St.	Evansville
1022	Ruschli, E. B.	Lafayette	2219	Lynch, Paul V., W. Franklin St.	Evansville
1023	Schaible, E.	Lafayette	388	Macer, Clarence G., Amer. Tr. Bldg.	Evansville
1024	Schreiber, Adam Wm.	Lafayette	141	Macer, E. C., Boehne Bldg.	Evansville
1025	Shafer, J. W.	Lafayette	140	Macer, Thomas, 1100 W. Franklin	Evansville
1026	Sweezy, H. N.	Lafayette	154	Magenheimer, E. F., Amer. Tr. Bldg.	Evansville
1027	Tea, Roger S.	Lafayette	134	McClary, D. V., Boehne Bldg.	Evansville
1028	Terry, O. P.	Lafayette	126	McClurkin, J. C., Amer. Trust Bldg.	Evansville
1029	Thomas, G. A.	Lafayette	157	McCool, W. E., 714 Upper 4th St.	Evansville
1030	Thompson, F. B.	Lafayette	2224	McKenzie, Pierce, Amer. Trust Bldg.	Evansville
1031	Throckmorton, G. K.	Lafayette	2191	Nenneker, Henry, R. R. 7.	Evansville
1032	Tubbs, Geo. R.	Lafayette	2218	Patterson, A. R., West Franklin St.	Evansville
1033	Van Reed, Earl.	Lafayette	145	Phares, J. W., Hayden Hospital.	Evansville
1034	Wagoner, R. H.	Lafayette	137	Pollard, Walter, 514 Upper 2nd St.	Evansville
1035	Westfall, A. B.	Lafayette	2215	Ravdin, B. D., Citizens Bank Bldg.	Evansville
1036	Wetherill, R. B.	Lafayette	2216	Ravdin, Marcus, Citizens Bank Bldg.	Evansville
1037	Wilson, Milton C.	Lafayette	386	Reitz, P. C., American Trust Bldg.	Evansville
1522	Wray, Curtis M.	New Richmond	120	Rose, B. S., 24 E. Pennsylvania St.	Evansville

TIPTON COUNTY

270	Burkhardt, A. E.	Tipton	142	Seitz, Chas. L., Walker Hospital.	Evansville
1456	Chance, B. V.	Windfall	2221	Sutter, C. C., 7 Cumberland Ave.	Evansville
1377	Cooper, John W.	Kempton	387	Todd, J. N., 15 Cumberland Ave.	Evansville
557	Cotton, S. M.	Goldsmith	150	Tully, Lee, Boehne Bldg.	Evansville
2497	Davis, Ed. C.	Windfall	2600	Tweedall, D. G., 1014 W. Franklin St.	Evansville
1376	Dunham, W. F.	Kempton	2043	Varner, Geo. W., W. Franklin St.	Evansville
271	Furney, W. C.	Sharpville	132	Viche, Robt. W., 507 S. 1st St.	Evansville
556	Gifford, H. S.	Tipton	122	Walden, R. M., 620 Fulton Ave.	Evansville
559	Grishaw, H. E.	Tipton	147	Walker, Edwin, Walker Hospital.	Evansville
1457	Hinkle, E. I.	Goldsmith	2316	Warner, Philip, Old State Bk. Bldg.	Evansville
1374	Huron, W. B.	Tipton	131	Weiss, H. G., Fendrich Bldg.	Evansville
269	Longfellow, T. W.	Martinsville	383	Wier, J. E., Marine Hospital.	Evansville
272	Marshall, R. E.	Curtisville	158	Welborn, J. Y., Walker Hospital.	Evansville
1373	Moser, E. B.	Windfall	118	Willis, J. H., 620½ Main St.	Evansville
1459	Newcomer, Martin V. B.	Tipton	2591	Woods, W. P., American Trust Bldg.	Evansville
1375	Read, H. G.	Tipton	125	Yee's, Chas. W., Amer. Trust Bldg.	Evansville
274	Reagan, L. M.	Tipton			
1372	Recohs, Robert M.	Tipton			
558	Shoup, H. B.	Sharpville			
1458	Tressider, J. T.	Tipton			
273	Warne, G. H.	Tipton			

UNION COUNTY

544	Beard, E. R.	Liberty	748	Alexander, O. O., Rose Disp. Bldg.	Terre Haute
542	Closson, J. C.	Liberty	719	Asbury, W. D., Rose Disp. Bldg.	Terre Haute
540	Dubois, F. T.	Liberty	752	Baldridge, E. R., Rose Disp. Bldg.	Terre Haute
543	Hawley, W. H.	College Corner, O.	754	Barbazette, L. F., T. H. Trust Bldg.	Terre Haute
545	Pigman, Garrett	Liberty	1773	Bethea, D. A., 1325 Wabash Ave.	Terre Haute
546	Schonwald, J. D.	College Corner, O.	751	Bernheimer, H. L., Naylor Cox Bldg.	Terre Haute
541	Thompson, W. A.	Liberty	753	Bohn, J. C.	Tacoma, Wash.

VANDERBURGH COUNTY

2493	Bacon, Chas. P., 921 Upper 2d St.	Evansville	756	Casey, Otto	Clinton
2223	Baker, C. S., Walker Hospital	Evansville	1812	Chambers, C. L.	Des Moines, Iowa
2593	Baker, H. M., Old State Bank Bldg.	Evansville	758	Combs, Chas. N., 221 S. Sixth St.	Terre Haute
121	Barnes, Wm. E., 702 E. Columbia St.	Evansville	944	Combs, M. R., Tribune Bldg.	Terre Haute
148	Begley, Baxter	Inglefield	755	Congleton, Geo. C., 12th & Wabash.	Terre Haute
2601	Bracley, L. C., Walker Hospital	Evansville	759	Cook, J. H., Swope Block	Terre Haute
138	Bradley, C. W., Boehne Bldg.	Evansville	2351	Cooper, James A., 311 S. Fifth St.	Terre Haute
2041	Brose, L. D., 1st and Walnut Sts.	Evansville	1294	Crapo, Geo. W., 1500 S. Sixth St.	Terre Haute
2594	Bryan, Tony L., 516 Walnut St.	Evansville	945	Crawford, W. G., 221 S. Sixth St.	Terre Haute
382	Burkholder, H. J., Intermed. Bldg.	Evansville	2397	Dailey, John E.	West Terre Haute
128	Busse, E. P., 420 Upper 1st St.	Evansville	762	Donnelly, J. E., Swope Block	Terre Haute
2318	Cain, D. B., North Side Bank	Evansville	802	Danner, R. J.	West Terre Haute
2592	Cleveland, W. R., Intermediate Bldg.	Evansville	761	Douglas, R. B., 1901 N. Tenth St.	Terre Haute
151	Clippinger, W. F., R. R. 4.	Evansville	760	Drake, J. F., R. R. C.	Terre Haute
133	Coleman, W. H., 722 Fulton Ave.	Evansville	803	Duenweg, Rudolph, Tribune Bldg.	Terre Haute
152	Combs, P. B., Boehne Bldg.	Evansville	2270	Dupuy, C. M.	Riley
135	Conover, Earl, 410 Upper 2nd St.	Evansville	1410	Edwards, Chas. H., Rea Bldg.	Terre Haute
2214	Cottingham, I. E., Intermed. Bldg.	Evansville	1657	Flaughner, E. A.	Cayuga
2042	Davidson, W. R., Walker Hospital.	Evansville	763	Forsyth, D. H., 634½ Wabash Ave.	Terre Haute
2639	Dome, H. S., 406 E. Cal. St.	Evansville	1943	Freed, J. E., 954 Lafayette Ave.	Terre Haute
155	Dyer, W. C., Intermediate Bldg.	Evansville	765	Gerrish, W. D.	Clinton
390	Ehrich, Wm. S., Citizens Bank Bldg.	Evansville	766	Gilliland, Chas. E., Trust Bldg.	Terre Haute
389	Eichel, Sidney J., Cit. Bank Bldg.	Evansville	764	Gillum, J. R., 221 S. Sixth St.	Terre Haute
153	Fieid, Wm. H., 1st and Walnut Sts.	Evansville	1424	Givens, C. C.	Lewis
124	Floyd, B. L., Intermediate Bldg.	Evansville	1774	Hale, David H., 1221 Wabash Ave.	Terre Haute
2490	Fritsch, L. B., 1111 E. Franklin St.	Evansville	1658	Hebble, David W.	North Terre Haute
391	Garrison, H. M., Grant and Green.	Evansville	1384	Hewitt, John H., McKen Bldg.	Terre Haute
146	Goble, D. S., 224 Kentucky St.	Evansville	1425	Hunt, John S.	West Terre Haute
119	Hare, J. H., Boehne Bldg.	Evansville	1411	Hunt, Wm. B., R. R. C.	Terre Haute
2607	Harpole, C. B., 407½ N. 2nd St.	Evansville	767	Hutchings, B. M., McKen Bldg.	Terre Haute
2317	Hartley, C. A., Wood Bldg.	Evansville	1412	Jenkins, W. D., Terre Haute House.	Terre Haute
123	Hartloff, Chas., Intermediate Bldg.	Evansville	1385	Jett, Frank H., 221 S. Sixth St.	Terre Haute
2040	Hayden, A. M., 1st and Walnut Sts.	Evansville	768	Johnson, Geo. T., Tribune Bldg.	Terre Haute
385	Heberer, J. M., 1013 Powell Ave.	Evansville	770	Jones, C. W., 19th and Locust Sts.	Terre Haute
139	Heiman, Leopold, Citizens Bk. Bldg.	Evansville	769	Knöfel, A. F., Tribune Bldg.	Terre Haute
392	Herbert, S. Z., Hayden Hospital.	Evansville	1296	Knowlton, Millard	Washington, D. C.
2222	Hewins, Warren W., Intermed. Bldg.	Evansville	946	Kunkler, Jos., 4th and Chestnut.	Terre Haute
136	Hurst, W. R., 2nd and Main Sts.	Evansville	1955	Kutch, M. H., Rea Bldg.	Terre Haute
2492	Jerome, J. N., Citizens Nat'l Bank.	Evansville	775	LaBier, C. R., Rose Disp. Bldg.	Terre Haute
129	Johnson, G. C., Amer. Trust Bldg.	Evansville	773	Larkins, E. L., 1231 Wabash Ave.	Terre Haute
2217	Kerth, J. H., Upper 2nd St.	Evansville	774	Layman, E. W., 9th and Lafayette.	Terre Haute
156	Knapp, A. J., Intermediate Bldg.	Evansville	1659	Louks, Thomas C., 13th and Locust.	Terre Haute
2315	Knapp, Bleeker J., Intermediate Bldg.	Evansville	772	Luckett, C. L., McKen Bldg.	Terre Haute
2220	Knapp, Henry C.	Evansville	771	Luckett, L. P., McKen Bldg.	Terre Haute
384	Knapp, H. J., 1013 Powell Ave.	Evansville	1298	Mattox, E. L., Tribune Bldg.	Terre Haute
381	Laubscher, S. R., R. R. No. 6.	Evansville	777	McAllister, E. B., 1232 Wabash.	Terre Haute
114	Laughlin, C. E., Woodmere.	Evansville	778	McBride, E. C., 10 N. Seventeenth.	Terre Haute
130	Laval, William, 220 Main St.	Evansville	947	McCall, James, Rose Disp. Bldg.	Terre Haute

VIGO COUNTY

748	Alexander, O. O., Rose Disp. Bldg.	Terre Haute
719	Asbury, W. D., Rose Disp. Bldg.	Terre Haute
752	Baldridge, E. R., Rose Disp. Bldg.	Terre Haute
754	Barbazette, L. F., T. H. Trust Bldg.	Terre Haute
1773	Bethea, D. A., 1325 Wabash Ave.	Terre Haute
751	Bernheimer, H. L., Naylor Cox Bldg.	Terre Haute
753	Bohn, J. C.	Tacoma, Wash.
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1772	Brunker, James W.	Riley
1295	Caffee, Amos H., Rose Disp. Bldg.	Terre Haute
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1498	Carpenter, Geo. C., 334 S. 13th St.	Terre Haute
1109	Casebeer, I. M.	Clinton
756	Casey, Otto	Clinton
1812	Chambers, C. L.	Des Moines, Iowa
758	Combs, Chas. N., 221 S. Sixth St.	Terre Haute
944	Combs, M. R., Tribune Bldg.	Terre Haute
755	Congleton, Geo. C., 12th & Wabash.	Terre Haute
759	Cook, J. H., Swope Block	Terre Haute
2351	Cooper, James A., 311 S. Fifth St.	Terre Haute
1294	Crapo, Geo. W., 1500 S. Sixth St.	Terre Haute
945	Crawford, W. G., 221 S. Sixth St.	Terre Haute
2397	Dailey, John E.	West Terre Haute
762	Donnelly, J. E., Swope Block	Terre Haute
802	Danner, R. J.	West Terre Haute
761	Douglas, R. B., 1901 N. Tenth St.	Terre Haute
760	Drake, J. F., R. R. C.	Terre Haute
803	Duenweg, Rudolph, Tribune Bldg.	Terre Haute
2270	Dupuy, C. M.	Riley
1410	Edwards, Chas. H., Rea Bldg.	Terre Haute
1657	Flaughner, E. A.	Cayuga
763	Forsyth, D. H., 634½ Wabash Ave.	Terre Haute
1943	Freed, J. E., 954 Lafayette Ave.	Terre Haute
765	Gerrish, W. D.	Clinton
766	Gilliland, Chas. E., Trust Bldg.	Terre Haute
764	Gillum, J. R., 221 S. Sixth St.	Terre Haute
1424	Givens, C. C.	Lewis
1774	Hale, David H., 1221 Wabash Ave.	Terre Haute
1658	Hebble, David W.	North Terre Haute
1384	Hewitt, John H., McKen Bldg.	Terre Haute
1425	Hunt, John S.	West Terre Haute
1411	Hunt, Wm. B., R. R. C.	Terre Haute
767	Hutchings, B. M., McKen Bldg.	Terre Haute
1412	Jenkins, W. D., Terre Haute House.	Terre Haute
1385	Jett, Frank H., 221 S. Sixth St.	Terre Haute
768	Johnson, Geo. T., Tribune Bldg.	Terre Haute
770	Jones, C. W., 19th and Locust Sts.	Terre Haute
769	Knöfel, A. F., Tribune Bldg.	Terre Haute
1296	Knowlton, Millard	Washington, D. C.
946	Kunkler, Jos., 4th and Chestnut.	Terre Haute
1955	Kutch, M. H., Rea Bldg.	Terre Haute
775	LaBier, C. R., Rose Disp. Bldg.	Terre Haute
773	Larkins, E. L., 1231 Wabash Ave.	Terre Haute
774	Layman, E. W., 9th and Lafayette.	Terre Haute
1659	Louks, Thomas C., 13th and Locust.	Terre Haute
772	Luckett, C. L., McKen Bldg.	Terre Haute
771	Luckett, L. P., McKen Bldg.	Terre Haute
1298	Mattox, E. L., Tribune Bldg.	Terre Haute
777	McAllister, E. B., 1232 Wabash.	Terre Haute
778	McBride, E. C., 10 N. Seventeenth.	Terre Haute
947	McCall, James, Rose Disp. Bldg.	Terre Haute

779	McCarthy, F. G., Tribune Bldg.....	Terre Haute
2271	McGuire, J. B., 15th and Locust, Terre Haute	Terre Haute
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781	Pierce, H. J., 221 S. Sixth St.....	Terre Haute
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1956	Shaff, D. C.....	Clinton
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787	Siebenmorgen, L., Trust Bldg.....	Terre Haute
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948	Spigler, O. R., Trust Bldg.....	Terre Haute
1387	Stephens, Madge P., Rose Disp., Terre Haute	Terre Haute
789	Stewart, W. B., Tribune Bldg.....	Terre Haute
1300	Stunkard, Thomas C., McKeen Bldg., Terre Haute	Terre Haute
1661	Swadener, Edward L.....	New Goshen
790	Thompson, G. J., 683½ Wabash, Terre Haute	Terre Haute
791	Ulmer, D. R., McKeen Bldg.....	Terre Haute
1662	Van Cleave, M. B., 4th and Walnut, Terre Haute	Terre Haute
792	Vandiver, H. R., 30½ S. 7th St., Terre Haute	Terre Haute
795	Ward, H. H.....	Coalmont
793	Warman, A. P., Trust Bldg.....	Terre Haute
1389	Wiedemann, F. E., Rose Disp. Bldg., Terre Haute	Terre Haute
1388	Weinstein, J. H., 221 S. 6th St.....	Terre Haute
796	White, I. D.....	Clinton
2603	Willien, W. F., Rose Disp. Bldg., Terre Haute	Terre Haute
797	Worrell, J. P., 20 S. 7th St.....	Terre Haute
794	Wyeth, Charles, Tribune Bldg.....	Terre Haute
798	Yung, J. R., Star Bldg.....	Terre Haute
806	Zaring, E. T., Rose Disp. Bldg.....	Terre Haute
2069	Zink, C. M.....	Clinton

WABASH COUNTY

311	Balsbaugh, George.....	North Manchester
308	Beaman, Z. M.....	North Manchester
293	Brodbeck, G. H.....	Roann
295	Browne, F. S.....	LaFontaine
314	Cripe, E. J.....	North Manchester
505	Domer, Walter.....	Wabash
305	Elliott, Geo. W.....	Wabash
300	Hale, N. T.....	Wabash
313	Holloway, Emma G.....	North Manchester
297	Jewett, L. E.....	Wabash
304	Jordan, M. F.....	Wabash
2344	King, C. H.....	Wabash
309	Kitson, F. S.....	North Manchester
302	LaSalle, G. M.....	Wabash
299	Moore, P. G.....	Wabash
296	Pearson, E. D.....	Wabash
310	Perry, Ira E.....	North Manchester
454	Renner, M. E.....	Lagro
1954	Rogers, Earl A.....	Somerset
298	Sholtz, L. O.....	Wabash
312	Shoemaker, Geo. L.....	North Manchester
316	Siegmund, E. J.....	Wabash
306	Smith, L. W.....	Wabash
2272	Stewart, John W. G.....	Wabash
294	Thompson, N. H.....	Wabash
315	Thorpe, B. B.....	Roann
307	Warvel, J. L.....	North Manchester
303	Whisler, F. M.....	Wabash
317	Wilson, J. D.....	Laketon
301	Wilson, James.....	Wabash

WARRICK COUNTY

1308	Ford, Wm. P.....	Boonville
1306	Hoover, J. G.....	Boonville
2285	Hoover, P. N.....	Boonville
1304	Kister, G. H., 1820 Main St.....	Evansville
1307	Samples, John T.....	Boonville
2284	Spradley, N. M.....	Boonville
2286	Wilhelmus, Chas. M.....	Newburg
1309	Wilson, Dalton, Walker Hospital.....	Evansville
1305	Wilson, P. E.....	Boonville
2288	Wilson, Wesley.....	Newburg
2287	Youngblood, E. L.....	Boonville
1310	Zimmerman, J.....	Lynnville

WASHINGTON COUNTY

2436	*Cook, W. H.....	Livonia
2392	Green, Wm. L.....	Pekin
2390	Huckleberry, Irvin E.....	Salem
2434	Kelly, James F.....	Salem
2391	May, Frank A.....	Hardinsburg
2393	Meade, Ernest C.....	Livonia
2387	Mitchell, John I.....	Salem
2394	Mull, Philip L., 101 W. Chestnut, Louisville, Ky.	Salem
2432	Murphy, Chas. W.....	Salem
2389	Paynter, Claude B.....	Salem
2388	Paynter, Lawrence W.....	Salem
2433	Roberts, Samuel A.....	Salem
2435	Robertson, A. N.....	Campbellsburg

WAYNE COUNTY

885	Blossom, J. C.....	Richmond
887	Bond, Chas. S., 112 N. Tenth St.....	Richmond
56	Boyd, H. B.....	Cambridge City
889	Buche, F. P., 106 S. 7th St.....	Richmond
2537	Bulla, Mora S., 32 S. 9th St.....	Richmond
218	Churchell, E. R., 2nd Nat'l Bank Bldg., Richmond	Richmond
216	Davis, T. H., 21 S. 8th St.....	Richmond
1438	Deardorff, Oliver M.....	Hagerstown
55	Denny, E. C.....	Milton
2261	Fackler, V. N.....	Dublin
2373	Fisher, Wm. T.....	Fort Strong, Mass.
2030	Ford, O. P. M.....	Centerville
2032	Fouts, John M., 48 S. 7th St.....	Richmond
2355	Gentle, Luke M., 52 S. 8th St.....	Richmond
53	Griffin, V. C., 23 S. 8th St.....	Richmond
59	Hagie, F. E., 218 N. 13th St.....	Richmond
2260	Hays, Geo. R., 2nd Nat'l Bank Bldg., Richmond	Richmond
54	Holland, E. E., Kelly Bldg.....	Richmond
881	Huff, O. N.....	Fountain City
219	Hunt, Geo. B., 201 N. 7th St.....	Richmond
57	Johnston, M. F., 103 N. 10th St.....	Richmond
880	King, J. E., 24 S. 9th St.....	Richmond
886	Krueger, F. W., 45 S. 7th St.....	Richmond
2307	Littell, W. R.....	Cambridge City
884	Markley, S. C., 34 S. 7th St.....	Richmond
60	Marvel, Charles, 127 N. 10th St.....	Richmond
2354	McKee, Chas. E.....	Dublin
882	Misener, W. L., 200 N. 8th St.....	Richmond
1383	Morrow, Sarah J., 27 N. 7th St.....	Richmond
890	Pierce, R. J., 30 S. 10th St.....	Richmond
888	Ross, L. F., Nat'l Bank Bldg.....	Richmond
2541	Schillinger, Richard, 118 N. 8th St.....	Richmond
2259	Smith, S. E., Easthaven Hospital.....	Richmond
2356	Squier, W. C., Glen Miller Sanitarium, Richmond	Richmond
2306	Study, J. N.....	Cambridge City
883	Wampler, John M.....	Richmond
2258	Whallon, A. J., 29 S. 10th St.....	Richmond
58	Wickens, Mary, Easthaven Hospital.....	Richmond
217	Wisener, G. H., 127 N. 10th St.....	Richmond
2031	Wright, J. E.....	Cambridge City
	Yencer, M. W., 22 N. 14th St.....	Richmond

WELLS COUNTY

1796	Brickley, Harry D.....	Bluffton
1802	Brown, A. W.....	Bluffton
1809	Blue, C. L.....	Tocsin
1799	Cook, L. H.....	Bluffton
1804	Dickerson, F. M.....	Bluffton
1810	Dyer, Edwin M.....	Ossian
1800	Garrett, Frank W.....	Liberty Center
1801	Goodin, Samuel A.....	Uniondale
1805	Harris, B. W.....	Uniondale
1806	Hatfield, I. N.....	Bluffton
1952	Huffman, David C.....	Poneto
2119	McBride, J. L.....	Zanesville
1793	McKean, Thomas J.....	Monroe
1807	McKinney, J. W.....	Bluffton
1797	Mead, C. H.....	Bluffton
1794	Metts, Fred A.....	Bluffton
1808	Morris, Geo. B.....	Monroe
1795	Redding, J. L.....	Bluffton
1951	Reynolds, F. M.....	Montpelier
1798	Severin, Louis.....	Bluffton
1803	Shoemaker, Samuel A.....	Bluffton
1811	Wybourn, David Chas.....	Ossian

WHITE COUNTY

1419	Clayton, Geo. R.....	Monon
1422	Coffin, Guy R.....	Monticello
1421	Didlake, M. T.....	Monticello
1423	Gable, Homer B.....	Monticello
1417	Galbreath, J. P.....	Burnetts Creek
1440	Gossett, Wm. O.....	Brookston
1420	McBeth, Walter.....	Burnetts Creek
1441	Netherton, C. R.....	Chalmers
1416	Reagan, R. M.....	Monon
1418	Spencer, Wm. A.....	Wolcott
1605	Wells, G. M.....	Chalmers

WHITLEY COUNTY

1587	Briggs, Jesse H.....	Churubusco
1586	Eberhard, Fred G.....	South Whitley
161	Egolf, H. M.....	Columbia City
1583	Franks, Otto P.....	Churubusco
164	Grisier, F. G.....	Columbia City
1590	Grisier, Otto W., Lt. M.C., U.S.N., Marine	Vallejo, Calif.
	Barrack.....	Vallejo, Calif.
1585	Hart, Bruce D.....	South Whitley
2311	Hershey, E. A.....	Churubusco
166	Kithcart, N. I.....	Columbia City
162	Linville, D. S.....	Columbia City
168	Lutes, D. L.....	R. F. D., Columbia City
1582	Nolt, Ernest V.....	Columbia City
165	Pence, B. L.....	Columbia City
167	Schuman, O. V.....	Columbia City
1588	Scott, James Wm.....	R. F. D., Columbia City
1584	Sowers, J. H.....	South Whitley
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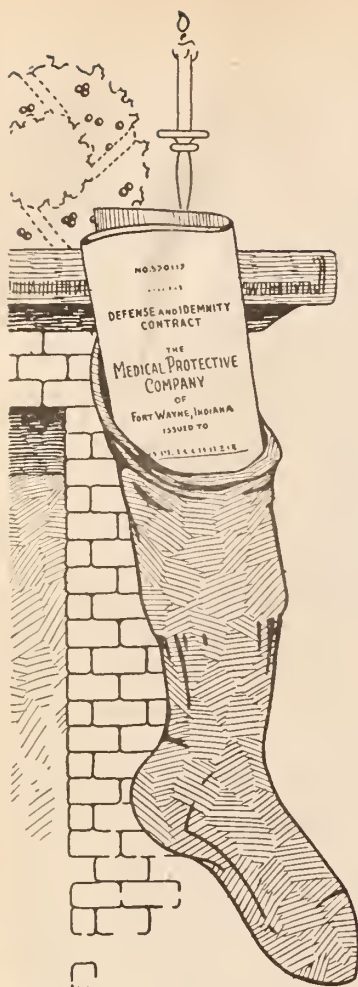
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